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14. ABSTRACT

The purpose of this study is to pilot test practice improvement approaches for management of PTSD in military behavioral health treatment settings. This project also targets depression, which is highly comorbid with PTSD. Key evidence-based recommendations from the US Departments of Veterans Affairs and Defense (VA/DoD) Clinical Practice Guideline for the Management of PTSD and 3 other major practice guidelines were identified by a team of PTSD experts convened by APIRE. The PTSD Checklist-Civilian Version (PCL-C) and 9-item Patient Health Questionnaire (PHQ-9) were selected as screening, diagnosis and severity monitoring instruments for PTSD and depression, respectively. Performance Improvement in Practice (PIP) tools to inform evidence-based assessment and management of PTSD and depression have been developed and published. APIRE will recruit 20 mental health providers and their key clinical staff from selected MTFs for three interactive CME sessions, modeled after the Institute for Healthcare Improvement Breakthrough Series collaborative methodology. Participants will use the PIP tools to evaluate their practices' capacity to provide evidence-based care and identify potential gaps in the assessment and treatment of PTSD and depression, and explore strategies to implement the PCL-C and PHQ-9 for routine screening and management of PTSD and depression. We are currently compiling required documentation for MEDCOM authorization for brief site visits of potential demonstration sites.

15. SUBJECT TERMS

Evidence-based care, Treatment recommendations, PTSD, Dissemination

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A Comprehensive Approach to Disseminate Evidence-Based Care for PTSD
Running Title: PTSD/Depression Care Dissemination Project

Introduction

The need for improved treatment of PTSD and depression is underscored by the substantial prevalence of these disorders in the military and in general populations. In a recent study of Army soldiers, PTSD rose from 5% before deployment to 13% after deployment to Iraq, and depression increased from 5% to 7%; it is estimated that up to 28% of soldiers returning from Iraq may meet criteria for anxiety or depression (1). Another study found that 35% of soldiers returning from Iraq receive mental health care in the year following Iraq deployment (2). Despite these data, the RAND Corporation (2008) found that among those returning from Iraq or Afghanistan with PTSD or depression, less than half received any mental health services, and only half of those received minimally adequate care (3). These figures highlight the need for timely and accurate identification, diagnosis, and treatment of affected service members.

In September of 2008, the American Psychiatric Institute for Research and Education (APIRE) received a Department of Defense PTSD Research Program Concept Award to pilot test practice improvement strategies to facilitate evidence-based approaches to management of PTSD in military behavioral health settings. Because of high rates of comorbidity of PTSD and depression, and to parallel current efforts in the Army's RESPECT-MIL program, this project also targets evidence-based care for depression. The aims of the PTSD/Depression Care Dissemination Project are to:

1) systematically identify and disseminate key evidence-based recommendations to support clinical decision-making in the assessment, diagnosis, and treatment of PTSD and depression in military behavioral health settings;
2) select psychometrically-validated and easy-to-use measures for screening, diagnosing, and monitoring PTSD and depression;
3) test practice improvement activities to facilitate management of PTSD and depression in military behavioral health settings.

Traditional didactic approaches to continuing education have shown limited success in changing practice (4-5). However, practice collaborative methodology modeled after the Institute for Health Care Improvement (IHI) Breakthrough Series (BTS) allows clinicians to actively plan, test, and implement practice improvements that can significantly improve care delivery efficiency and treatment outcomes (6). The PTSD/Depression Care Dissemination Project is adopting and adapting this methodology to facilitate dissemination of high impact evidence-based PTSD/depression assessment, diagnosis, and treatment approaches for use in Army behavioral health settings.

Body: To meet project objectives, four tasks have been outlined below, followed by a brief update on the status of each.

Task 1: *Extract key recommendations from three major practice guidelines for the treatment of patients with PTSD that are considered professional standards among clinicians; document agreements and discrepancies between the two guidelines; develop quality indicators.*

Status: This task was completed in the first quarter following initiation of the project. Four major guidelines were reviewed**,** including the US Departments of Veterans Affairs and Defense (VA/DoD) Clinical Practice Guideline for the Management of PTSD (2004; 7), the American Psychiatric Association practice guideline for the treatment of patients with ASD and PTSD (2004; 8), the National Collaborating Centre for Mental Health PTSD Clinical Guidelines (2005; 9), the APA Guideline Watch (2009; 10), and the Institute of Medicine (IOM) report on Posttraumatic Stress Disorder: Diagnosis and Assessment (2006; 11). Key recommendations for the assessment and treatment of PTSD were extracted and included in a table format (Appendix 1). This table was shared, discussed, and updated based on recommendations from the team of experts assembled under Task 2, and subsequently served as the foundation for developing the Performance in Practice (PIP) tools for PTSD

(Appendix 2; 12). The PIP tools for PTSD were published in the Spring 2009 issue of Focus. It is important to note that this publication only includes key recommendations from major guidelines published in the United States in order to complement treatment strategies supported in the US health care systems. The PIP tools for depression were available earlier (Appendix 3; 13), and served as a model for subsequent PTSD PIP tool development.

The PIP tools have multiple applications. First, they provide clinicians with active learning opportunities by translating conceptual information from practice guidelines into practical steps, supporting integration of evidence-based best practices into clinical care. Second, through strategies such as chart reviews and real-time evaluation of new or existing patients, the PIP tools can inform improvement efforts at the clinician-, practice- or systems-level, facilitate detection of potential gaps in evidence-based care, and speed the adoption of evidence-based care into clinical practice. Third, in anticipation of new Maintenance of Certification (MOC) requirements from the American Board of Medical Specialties (ABMS) and the American Board of Psychiatry and Neurology (ABPN) for self-assessment, the PIP tools will provide clinicians with early opportunities for self-assessment and will help prepare them for the coming changes to be implemented in 2014. Fourth, the PIP tools are applicable beyond psychiatry, as they can be used for self-assessment by other provider groups to support improvement activities for PTSD and depression care.

For the purposes of this project, clinicians participating in CME learning sessions will be asked to use the PIP tools for PTSD and depression (Appendices 2 and 3) to evaluate their practices' capacity to provide evidence-based care and identify potential gaps in the assessment and treatment of PTSD and depression as targets for potential quality improvement efforts. During the project's interactive learning sessions (under Task 3), clinicians will employ the Plan-Do-Study-Act approach promoted by IHI-BTS methodology to actively plan, test, and implement incremental improvements in their practice. The IHI-BTS methodology has been well studied (6) and previously pilot-tested at APIRE as a part of the National Depression Management Leadership Initiative to enhance depression management in routine psychiatric practices (14).

Task 2: *Convene a team of experts to support following tasks:*

a. Examine and reconcile discrepant findings from the review in Task 1.

b. Identify psychometrically validated and easy-to-use measures for screening, diagnosing, and monitoring PTSD.

c. Adapt the Institute for HealthCare Improvement Breakthrough Series (IHI-BTS) model to develop a concentrated CME curriculum for training psychiatrists in evidence-based screening, diagnosing, monitoring and treatment of PTSD, incorporating findings from Tasks 1, 2a and 2b.

Status: Parts 2a and 2b of this task were completed in the first quarter following initiation of the project. Experts in the field were identified and invited to join the panel of experts. A series of substantive conference calls preceded a one-day, in-person meeting of the panel, which was convened on November 3, 2008. The panel was charged with completion of Task 2a, to examine and reconcile any discrepancies between major treatment guidelines, and Task 2b, to identify psychometrically validated and easy-to-use measures for screening, diagnosis, and monitoring of PTSD. An agenda and list of participants for this meeting are included in Appendix 4.

For Task 2a, the panel reviewed treatment recommendations that had been extracted from the major practice guidelines (Appendix 1). The panel used the 2009 APA Guideline Watch, which was considered to contain the most up-to-date evidence-based recommendations on treatment of PTSD in military populations, to reconcile any potential variations across guidelines.

To complete Task 2b, the panel reviewed Appendix 5 and agreed on the use of the PTSD Checklist-Civilian Version (PCL-C) for screening and monitoring PTSD. Panel also selected the 9-item Patient Health Questionnaire (PHQ-9) for screening and monitoring depression. These two assessment tools are also used in the RESPECT-MIL initiative, thus parallel approaches in measurement-base care will be promoted in primary care as well as behavioral health care settings.

The panel addressed part of Task 2c by providing valuable guidance on potential target settings and participants for this pilot project. They recommended that study efforts should be concentrated in selected DoD military treatment facilities (MTFs) rather than the VA settings. Additionally, the panel encouraged engaging mental health providers from various disciplines rather than psychiatry only.

Finally, the panel strongly encouraged involvement of Dr. Charles Engel, the Principal Investigator for the RESPECT-MIL initiatives, in the PTSD/Depression Care Dissemination Project. We are delighted that Dr. Engel has graciously accepted our invitation and has joined the project as co-investigator.

As part of the site selection process, MEDCOM leadership has encouraged brief site visits to better inform the curriculum development based on needs assessment and implementation process. We have identified potential locations and are developing the required documentation for the site visits.

Development of the interactive CME learning sessions under Task 2c is an on-going effort, which to a great extent will depend on the needs of the project clinicians. Core components of the sessions will include:

- Promoting clinician/practice self-assessment using PTSD/depression PIP tools to gauge knowledge of current evidence, identify potential gaps in evidence-based care and targets for quality improvement;
- Organizing improvement teams in each site to facilitate improvement activities;
- Routinizing PCL-C and PHQ-9 use for screening, diagnosis, severity/outcome monitoring;
- Promoting patient self-management to include formalized action plans aligned with patient treatment goals;
- Promoting the use of a registry to support proactive follow-up and tracking patients to treatment response and remission;
- Enhancing shared patient care across providers (e.g., behavioral health and primary care) by using the PCL-C and PHQ-9 to improve communication and patient tracking;
- Reviewing the latest evidence for co-occurring conditions, including alcohol and substance use, suicide, and other anxiety and mood disorders.

To date we have held a series of conference calls with military medical leadership and expert panel members in order to gain more thorough knowledge of the RESPECT-MIL program in primary care settings, better understand improvement needs in behavioral health, and identify potential study sites. Several sites have been recommended as potential candidates for this pilot project including Fort Hood TX, Fort Stewart GA, Fort Lewis WA, Fort Meade MD, and Fort Carson, CO. We are in the process of compiling required documentation to obtain permission from MEDCOM for site visits and thereafter obtain IRB approvals from the APIRE and the USAMRMC Human Research Protection Office. Given that this project is considered quality improvement, we anticipate an expedited review by site IRBs.

Several presentations of study methods and PIP products have been made/planned to date, including: 1) oral presentation at the 12th Annual Force Health Protection (August 17-21, 2009); 2) oral and poster presentations at the 2009 Military Health Research Forum (August 31 – September 3, 2009); and 3) oral presentation at the upcoming American Psychiatric Association 2009 Institute on Psychiatric Services (October 8-11, 2009).

Task 3: *Implement a pilot study by recruiting 20 local psychiatrists to attend the CME course (developed in Task 2c); evaluate participants' knowledge concerning PTSD before and after the course.*

Status:

Based on recommendations of the panel members and military medical leadership we are in the process of compiling required documentation to obtain permission from MEDCOM to conduct brief site-visits to identify potential demonstration sites. Military medical leadership strongly recommended sites beyond the originally targeted Washington DC metropolitan area. As described under Task 2c, potential sites include: Fort Hood, TX; Fort Stewart, GA; Fort Lewis, WA; Fort Meade, MD; Fort Carson, CO. After confirming project sites, we will proceed with obtaining approval from APIRE and site IRBs, and review by the USAMRMC Human

Research Protection Office. We plan to request a no-cost extension to permit completion of Task 3; required documentations are being prepared for submission.

Task 4: *Conduct a 5-month follow-up study to assess: a) sustainability of the improvement gains achieved following the completion of the course, b) spread within practice to other psychiatric conditions; and c) spread to other clinicians, practices and across specialties (e.g., spread to primary care physicians).*

Status: We plan to request a no-cost extension to permit completion of Task 4.

Key Research Accomplishments:

Key research accomplishments to date include:

- Extracting key assessment and treatment recommendations for PTSD from four major practice guidelines that are considered professional standards among clinicians (Appendix 1)
- Convening an expert panel meeting to: 1) address discrepancies across guidelines (Appendix 1) , 2) select assessment tools for screening, diagnosis, and severity monitoring for PTSD and depression – PCL-C and PHQ-9 have been selected, 3) inform site selection process (see Task 2)
- Developing PIP tools for PTSD (Appendix 2), based on work accomplished under Task 1 (Appendix 1)
- Disseminating PTSD PIP tools at the 2009 APA annual meeting and the 2009 Force Health Protection to a wide audience of clinicians to support clinician/practice self-assessment
- Continued communication with military medical leadership to gain knowledge of the RESPECT-MIL program in primary care settings, to better understand improvement needs in behavioral health, and to identify potential study sites

Reportable Outcomes

- Published *Performance in Practice: Clinical Tools for the Care of Patients with Posttraumatic Stress Disorder*; Focus; Spring 2009; 7:186-191.
- Oral presentation at the 12th Annual Force Health Protection (August 17-21, 2009)
- Oral and poster presentations at the 2009 Military Health Research Forum (August 31 – September 3, 2009)
- Oral presentation at the upcoming American Psychiatric Association 2009 Institute on Psychiatric Services (October 8-11, 2009).
- Applied for external funding to: 1) evaluate the feasibility of implementing PIP tools for PTSD and depression to support clinician self-assessment, and 2) assess the impact of the PIP tools on practice change and improvement activities.

Conclusion

Successful implementation of the PTSD and Depression Care Dissemination Project will facilitate integration of psychometrically validated assessment tools, including the PCL-C and the PHQ-9 as a routine part of PTSD and depression care to support case identification and treating service members to response and remission. Moreover, the PIP tools for PTSD developed through this grant has the potential to change the way new scientific information is disseminated and adopted in routine practice. Successful implementation of the PIP approach could have immediate impact by lessening existing gaps between evidence-based practice and actual care, and provide preliminary data to inform future development of self-assessment tools for MOC competency requirements launching in 2014. This project will make available an effective model for implementing and disseminating high impact evidence-based care for PTSD, depression and other psychiatric disorders, to improve care delivery efficiency and treatment outcomes among suffering service members.

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Appendix 1
Evidence-Based Guideline Assessment and Treatment Recommendations for PTSD
PTSD/Depression Care Dissemination Project

Key Evidence-Based Guideline Recommendations	DoD/VA Guideline 2004†	APA Guideline 2004‡	NICE 2005§	IOM 2006	APA Guideline Watch
	Final Grade A – D, I	Level of Clinical Confidence I – III	Grade A – C	Recommendation	
DEFINITION					
Trauma - An extreme traumatic stressor involving direct personal experience…the person's response to the event must involve intense fear, helplessness, horror **Acute Stress Reaction (ASR) -** …onset of some signs and symptoms may be simultaneous with the trauma or may follow after an interval of hours or days…symptoms not resolved within 4 days after the event, after ruling out other disorders **Acute Stress Disorder (ASD) -** clinically significant symptoms >2 days, but <1month after exposure **Post Traumatic Stress Disorder (PTSD) -** clinically significant symptoms lasting more than 1 month after exposure to a trauma **Acute PTSD** - clinically significant symptoms lasting >1 month, but <3 months **Chronic PTSD** - clinically significant symptoms lasting >3 months after exposure to trauma **PTSD with delayed onset** - clinically significant symptoms at least 6 months after exposure to trauma					
STABILIZATION FOLLOWING AN ACUTE TRAUMA					
In the aftermath of an acute trauma – stabilize patient, provide supportive medical and psychiatric care, and assessment		**I**			
Assess for availability of basic resources for self care and recovery		**I**			

Key Evidence-Based Guideline Recommendations	DoD/VA Guideline 2004†	APA Guideline 2004‡	NICE 2005§	IOM 2006	APA Guideline Watch
	Final Grade A – D, I	Level of Clinical Confidence I – III	Grade A – C	Recommendation	
ASSESSMENT					
After large-scale catastrophes, initial psychiatric assessment includes: ✓ differential diagnosis of physical or psychological effects of traumatic event (e.g. anxiety from hemodynamic compromise, hyperventilation, fatigue, etc…) ✓ identification of persons or groups at greatest risk for subsequent psychiatric disorders including ASD or PTSD		**I**			
Assess for trauma exposure ✓ Recency ✓ Type ✓ Nature ✓ Severity ✓ History	**B**	**I**			
Screen all patients for PTSD (based on DoD/VA guideline recommendations -- suggested initially and then on an annual basis or more if clinically indicated)	**B**	**I** Screen for recent or remote trauma exposure	**C** > For individuals at high risk of developing PTSD (following a major disaster) consideration should be given to the routine use of a brief screening instrument for PTSD at 1 month after the disaster		
Assess for pre-trauma risk factors for ASD/PTSD ✓ prior exposure to trauma ✓ adverse childhood ✓ younger age ✓ minority race, ✓ female gender ✓ low socioeconomic or educational status ✓ psychiatric disorders or personality dimensions ✓ cognitive factors	**B**	**I**			

Key Evidence-Based Guideline Recommendations	DoD/VA Guideline 2004†	APA Guideline 2004‡	NICE 2005§	IOM 2006	APA Guideline Watch
	Final Grade A – D, I	Level of Clinical Confidence I – III	Grade A – C	Recommendation	
Assess for peri-trauma risk factors for ASD/PTSD: ✓ severity of trauma ✓ peri-traumatic dissociation ✓ youth at time of exposure	**B**				
Assess for post-trauma risk factors for ASD/PTSD ✓ resource loss ✓ lack of social support ✓ ongoing life stressors, bereavement , pychosocial difficulties	**B**	**I**			
Assess for ASR, ASD at the time of trauma -- known risk factor for developing PTSD	**B**	**I**			
Assess for co-occurring physical or psychiatric disorders (depression, alcohol, other substance, or other anxiety disorders commonly co-occur with PTSD)	**B**	**I**			
Assess risk for suicide or harm to others	**B**	**I**			
Provide functional Assessment ✓ Global Functional Assessment using GAF or SF-36 ✓ Narrative Functional Assessment to include work/school, relationships, housing, legal, financial, unit/community involvement, and recreation	Insufficient Evidence	**I**			
Operational Risk: Because re-exposure to trauma exacerbate or trigger PTSD symptoms special consideration must be given when including patients with a history of PTSD symptoms in mission critical operations ✓ Danger to self or others ✓ Risk for family ✓ Ongoing health risk behavior ✓ Medical/psychiatric comorbidities or unstable medical conditions	**B**				
Additional useful information as a part of assessment include: time of onset, frequency, course, severity, level of distress, and time elapsed since exposure	Rating not available				

Key Evidence-Based Guideline Recommendations	DoD/VA Guideline 2004†	APA Guideline 2004‡	NICE 2005§	IOM 2006	APA Guideline Watch
	Final Grade A – D, I	Level of Clinical Confidence I – III	Grade A – C	Recommendation	
PSYCHIATRIC MANAGEMENT			**C** > Chronic disease management models should be considered for the mngmnt of pts w/ chronic PTSD who have not benefited from a number of courses of evidence-based treatment		> A study of collaborative care suggests that care-management in combination with evidence-based psychotherapy and medication Tx may diminish PTSD symptoms in acutely injured trauma survivors
Monitor patients with ASD for development of PTSD	**A**				
Evaluation and management of physical and psychological health and functional impairment		**I**			
Availability of resources for self-care and recovery		**I**			
Coordination of care		**I**			
Enhance treatment adherence		**I**			
Providing education regarding ASD/PTSD		**I**			
TREATMENT -PHARMACOTHERAPY				> Committee found the evidence for all classes of drugs reviewed (i.e. α-	> Emerging evidence for adjunct psychotherapy and d-cycloserine > Prazosin may be more effective than other medications indicated for PTSD (e.g. SSRIs)
Phamacotherapy may be the first-line intervention for acutely traumatized patients		**II**	**A** > Drug tx for PTSD <u>should not be</u> used as a routine first-line treatment for adults (in general use or by mental health specialist) in preference to a trauma-focused psychological therapy		

Key Evidence-Based Guideline Recommendations	DoD/VA Guideline 2004†	APA Guideline 2004‡	NICE 2005§	IOM 2006	APA Guideline Watch
	Final Grade A – D, I	Level of Clinical Confidence I – III	Grade A – C	Recommendation	
Propranolol may be considered for treatment of immediate post-event stress	**B**				
Pharmacotherapy for treatment of ASD – Impiramine for hyperarousal/excessive arousal/panic attacks	**B**				
Other pharmacotherapy for treatment of ASD ✓ Benzodiazepines for sleep disturbance/insomnia/ hyperarousal/excessive arousal/panic attacks ✓ Chloral hydrate for sleep disturbance/insomnia ✓ Propranolol for hyperarousal/excessive arousal/panic attacks	**C**	**III**			
SSRIs as first line for the treatment of PTSD	**A**	**I**	**B** > Drug tx (paroxetine or mirtazapine for general use, and amitriptyline or phenelzine for initiation by mental health specialists only) should be considered for the treatment of PTSD in adults who expresses a preference <u>not to engage</u> in a trauma-focused psychological tx	> Weight of the scientific evidence is insufficient to determine the efficacy of SSRIs	> Evidence for superiority of SSRIs and SNRIs over placebo for <u>non-combat-related</u> PTSD > SSRIs may no longer be recommended with the same level of confidence for veterans with <u>combat-related PTSD</u> as for patients with non-combat-related PTSD
Second line treatment for PTSD include TCAs and MAOIs	**B**	**II**			
Consider a second generation antidepressants (e.g. nefazodone, trazodone, venlafaxine, mirtazapine, bupropion, etc.) for management of PTSD	**C**	**III**			
Consider antidepressant trail of 12 weeks before changing therapeutic regimen	**B**				
Augment management of nightmares and other symptoms of PTSD with prazosin	**C**			> Potential efficacy for combat-related nightmares and sleep disturbance in veterans	
Consider maintenance treatment, reassess periodically	**C**				

Key Evidence-Based Guideline Recommendations	DoD/VA Guideline 2004†	APA Guideline 2004‡	NICE 2005§	IOM 2006	APA Guideline Watch
	Final Grade A – D, I	Level of Clinical Confidence I – III	Grade A – C	Recommendation	
Insufficient evidence in use of following class of drugs for the treatment of PTSD: ✓ Mood stabilizers ✓ Atypical antipsychotics ✓ Pharmacotherapy prophylaxis of PTSD	Insufficient evidence	**III**		> Potential efficacy for the adjunctive use of risperidone in pts inadequately responsive to other therapy	> Data are encouraging for adjunctive treatment with a 2nd generation antipsychotic in patients with partial response to an SSRI or SNRI, including for co-occurring psychotic symptoms
Recommend against: ✓ Long term use of benzodiazepines to manage core symptoms of PTSD ✓ Use of Benzodiazapine as monotherapy ✓ Typical antipsychotics in the management of PTSD	Insufficient evidence	**III**	**C** > Hypnotic medication for short-term use for sleep disturbance	> Evidence is inadequate to determine the efficacy of benzodiazepines in the tx of PTSD	
TREATMENT -PSYCHOTHERAPY				4 basic compnts of CBT: > Psychoedu. > exposure > cognitive restruct > anxiety mgmnt training	> Support for exposure-based CBTs such as CPT and prolonged exposure therapy when delivered in individual formats
Brief intervention of CBT (4 to 5 sessions) for ASD	**A**	**II**			
Cognitive Therapy (CT) is effective with civilian men and women exposed to combat and non-combat trauma	**A**	**II**	**A** > Trauma-focused CBT or EMDR on an individual outpatient basis **B** > Recommend 8-12 sessions for 90 min		
CT is effective with military and veteran with combat- and non-combat-related PTSD	Insufficient evidence				
CT is effective for women with PTSD associated with sexual assault	**A**				
Eye Movement Desensitization and Reprocessing (EMDR) is more efficacious for PTSD than control: wait-line, routine care, and active treatment controls	**A**	**II**		> Evidence is inadequate to determine the efficacy of EMDR in the tx of PTSD	
EMDR compared to ET and CT show mixed results	**B**				

Key Evidence-Based Guideline Recommendations	DoD/VA Guideline 2004†	APA Guideline 2004‡	NICE 2005§	IOM 2006	APA Guideline Watch
	Final Grade A – D, I	Level of Clinical Confidence I – III	Grade A – C	Recommendation	
Exposure Therapy (ET) is effective in the treatment of PTSD	**A**	**II**		> Evidence is sufficient to conclude the efficacy of exposure therapies in the tx of PTSD	
Stress Inoculation Training (SIT) is effective as a treatment for PTSD related to sexual assault	**A**	**II**			
Imagery Rehearsal Therapy (IRT) considered for treatment of PTSD (nightmares and sleep disruption in particular)	**B**	**II**			
Psychodynamic psychotherapy for the treatment of patient with PTSD/complex PTSD	**B**	**II**			
Consider group therapy (not favoring any particular type)	**B**	**III**			
Consider Dialectical behavior Therapy for patients with a borderline personality disorder typified by parasuicidal behaviors	**B**				
Hypnosis may be used to alleviate PTSD symptoms	**B**	Insufficient evidence			
Psychoeducation	**B-C**	**II**			
Case management		**II**			
Supportive psychotherapy		**II**			
Psychological debriefing is ineffective and has adverse long term effects	**D** Ineffective, or may be harmful	Not recommended	**A** > Debriefing should not be routine practice		

† DoD/VA Quality Rating

Final Grade of Recommendation

A A strong recommendation that the intervention is always indicated and acceptable
B A recommendation that the intervention may be useful/effective
C A recommendation that the intervention may be considered
D A recommendation that a procedure may be considered not useful/effective, or may be harmful.
I **Insufficient evidence** to recommend for or against – the clinician will use clinical judgment

‡ APA Clinical Confidence Rating

I Recommended with substantial clinical confidence.
II Recommended with moderate clinical confidence.
III May be recommended on the basis of individual circumstances.

§ National Institute for Clinical Excellence Grading Scheme for Levels of Evidence

A Evidence obtained from a single randomized controlled trial or a meta-analysis of randomized controlled trials
B Evidence obtained from at least one well-designed controlled study without randomization; evidence obtained from at least one other well-designed quasi-experimental study; evidence obtained from well-designed non-experimental descriptive studies, such as comparative studies, correlation studies and case studies
C Evidence obtained from expert committee reports or opinions and/or clinical experiences of respected authorities

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Performance in Practice: Clinical Tools to Improve the Care of Patients with Posttraumatic Stress Disorder

Abstract: To facilitate continued clinical competence, the American Board of Medical Specialties and the American Board of Psychiatry and Neurology are implementing multifaceted Maintenance of Certification programs, which include requirements for self-assessments of practice. Because psychiatrists may want to gain experience with self-assessment, two sample performance-in-practice tools are presented that are based on recommendations of the American Psychiatric Association (APA) Practice Guideline for the Treatment of Patients with Acute Stress Disorder and Posttraumatic Stress Disorder and the US Departments of Veterans Affairs and Defense (VA/DoD) Clinical Practice Guideline for the Management of Post-Traumatic Stress. One of these sample tools provides a traditional chart review approach to assessing care (Appendix A); the other sample tool presents an approach that permits a real-time evaluation of practice (Appendix B). Both tools focus on treatment of posttraumatic stress disorder (PTSD) among adults age 18 or older, and both can be used as a foundation for subsequent performance improvement initiatives with the aim of enhancing outcomes for patients with PTSD.

In current practice, psychiatrists, like other medical professionals, are expected to maintain their specialty expertise in the face of an ever-expanding evidence base. Because a number of studies have demonstrated a gap between recommended evidence-based best practices and actual clinical practice, a variety of strategies have been developed with the aim of improving the quality of clinical care (1–10). Proactive approaches to improving quality of care such as the use of clinical reminders (11–19) and audit and feedback of practice patterns to practitioners (12–14, 19–22) have resulted in some degree of care enhancement in contrast to the limited success in changing clinician behavior via traditional didactic approaches to education (e.g., CME conferences) (11–15, 23–26). It is also likely that a combination of quality improvement strategies will be essential in promoting substantial improvements in patient care and outcomes (13, 20, 21, 26–30).

As part of this effort to bridge the quality gap between evidence-based practices and actual clinical practice, the American Board of Medical Specialties and the American Board of Psychiatry and Neurology are implementing multifaceted Maintenance of Certification (MOC) programs that include requirements for self-assessments of practice through reviewing the care of at least five patients (31). As with the original impetus to create specialty board certification, the MOC programs are intended to enhance quality of patient care in addition to assessing and verifying the competence of medical practitioners over time (32, 33). Although

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the MOC phase-in schedule will not require completion of a Performance in Practice (PIP) unit until 2014 (31), individual psychiatrists may wish to begin assessing their own practice patterns before that time. To facilitate such self-assessment related to the treatment of posttraumatic stress disorder (PTSD), this article will provide sample PIP tools that are based on recommendations of two major guidelines published in the United States: APA's Practice Guideline for the Treatment of Patients with Acute Stress Disorder and Posttraumatic Stress Disorder (PTSD) (34) and the U.S. Departments of Veterans Affairs and Defense (VA/DoD) Clinical Practice Guideline for the Management of Post-Traumatic Stress (35), supplemented by the latest evidence in the most recent APA Guideline Watch (36). Other noteworthy practice guidelines for the treatment of PTSD include the Australian guidelines for the treatment of adults with acute stress disorder and PTSD (37) and the National Institute for Clinical Excellence management of PTSD in primary and secondary care (38).

The PIP tools described here have been developed to specifically address care of PTSD among adults age 18 years and older; screening, diagnosis, and treatment of PTSD among patients younger than 18 years of age is beyond the scope of this article. A similar set of self-assessment tools for the treatment of depression among adults was published earlier (39), guided by recommendations from the APA Practice Guideline for the Treatment of Patients with Major Depressive Disorder (40).

Evidence-based practice guidelines and quality indicators (41, 42) provide an important foundation for assessing quality of treatment. For a number of reasons, however, the realities of routine clinical practice may temper the development and assessment of a clinically appropriate treatment plan for a specific patient. First, as described previously (39), evidence-based practice guidelines and quality indicators are often derived from data based on randomized controlled trials (RCTs). Because patients in efficacy trials and even those in effectiveness trials must meet stringent enrollment criteria, they often differ in important ways from patients seen in routine clinical practice (43). For example, patients in RCTs are less likely to be suicidal, have co-occurring psychiatric and medical conditions that may interfere with treatment, or be as severely ill as patients in routine clinical practice. Such differences may need to be taken into account when a physician is formulating the best treatment plan for an individual patient.

In addition, when quality indicators are used to compare individual physicians' practice patterns, differences in patient characteristics and illness severity between practices may lead to false conclusions about differences in quality of care. In such circumstances, case mix adjustment is important to address confounding and permit accurate comparison of quality indicator results (44, 45). Also, inadequate attention to factors such as case mix adjustments may lead to unintended consequences such as excluding more severely ill or less adherent patients from practices in an attempt to improve performance on specific quality indicators. Finally, for patients who have complex conditions or are receiving simultaneous treatments for multiple disorders, composite measures of overall treatment quality may yield more accurate appraisals than measurement of single quality indicators (46–48).

Although the above caveats need to be taken into consideration, use of retrospective quality indicators can be beneficial for individual physicians who wish to assess their own patterns of practice. If a physician's self-assessment identifies aspects of care that frequently differ from key quality indicators, further examination of practice patterns would be helpful. Through such self-assessment, the physician may determine that deviations from the quality indicators are justified, or he or she may acquire new knowledge and modify his or her practice to improve quality. It is this sort of self-assessment and performance improvement efforts that the MOC PIP program is designed to foster.

INDICATORS FOR THE EVIDENCE-BASED RECOGNITION AND TREATMENT OF PTSD

The evidence underlying the development of indicators for quality assessment/improvement is generally derived from three sources: 1) experimental studies (e.g., RCTs); 2) epidemiologic or observational studies; and 3) expert consensus. For ASD and PTSD, recent clinical practice guidelines have examined these sources of evidence and have been published in the United States by APA (APA Practice Guideline for the Treatment of Patients with Acute Stress Disorder and Posttraumatic Stress Disorder) (34) and the VA/DoD (Clinical Practice Guideline for the Management of Post-Traumatic Stress) (35). The clinical indicators in Appendixes A and B are largely derived from these guidelines supplemented with information from a recent Guideline Watch that updates APA practice guidelines (36) and focuses on recent evidence for pharmacological and psychotherapeutic treatment for PTSD. Appendix C highlights key assessment and treatment recommendations derived from the aforementioned guidelines (34–36)

INDICATORS FOR SCREENING, ASSESSMENT, AND EVALUATION OF PTSD

The need for screening and diagnosis of PTSD in psychiatric practice is underscored by the substantial prevalence of PTSD in both the general population and in high-risk populations, especially after exposure to specific traumatic events. For example, recent epidemiologic studies using DSM-III-R and DSM-IV criteria have found the lifetime prevalence of PTSD to range from 6.4% to 9.2% (49–51). In addition, women generally have a higher risk of PTSD than men, controlling for type of trauma (51). These findings support the importance of quality indicators focused on screening for PTSD in the general population using structured instruments such as the PTSD Checklist-Civilian Version (PCL-C) (52). In recent studies of military service members deployed to Iraq and Afghanistan, PTSD prevalence rates of 5.0%–19.9% have been found, varying based on strict or broad definition of PTSD using the PCL, deployment location, and pre-post deployment status (53). In addition, several reports have suggested that routine screening for PTSD can identify subsyndromal PTSD with significant disability at least as frequently as PTSD that meets the full diagnostic criteria (48, 54, 55).

In addition to routine screening for PTSD in general civilian and military populations, evidence has suggested the need for intensive screening and diagnostic efforts intended for populations with a history of exposure to trauma. For example, elevated rates of lifetime and current prevalence of PTSD have been reported for populations exposed to terrorist attacks [e.g., 12.6% PTSD prevalence among residents of lower Manhattan after the 9/11 attacks (56) and 31% PTSD prevalence among survivors of the Oklahoma City bombing 1 year later (57)], natural disasters such as hurricanes [22.5% PTSD prevalence after Hurricane Katrina (58)] and earthquakes [24.2% PTSD prevalence 9 months after an earthquake in China (59)], and medically traumatic events such as burns [28.6% PTSD prevalence at 1 year (60)], cancer surgery [11.2%–16.3% 6-month PTSD prevalence after surgery (61)], acute coronary syndrome [12.2% PTSD prevalence at 1 year (62)], and hospitalization for traumatic injury [20.7% PTSD prevalence at 1 year (63)]. An additional consideration is the need for longitudinal screening of trauma survivors because the onset of PTSD symptoms may be delayed for 6 months or more in a substantial number of individuals. More specifically, a systematic review found that "studies consistently showed that delayed-onset PTSD in the absence of any prior symptoms was rare, whereas delayed onsets that represented exacerbations or reactivations of prior symptoms on average accounted for 38.2% and 15.3%, respectively, of military and civilian cases of PTSD" (64).

Finally, ongoing screening is essential in identifying PTSD in patients being evaluated or seeking treatment for other psychiatric conditions such as psychosis (65–67). Also, a substantial proportion of patients with mood and other anxiety disorders also have PTSD. For example, it has been estimated that 7%–40% of patients with bipolar disorder also meet the criteria for PTSD (68). In addition, the National Comorbidity Survey found the rate of affective disorders to be 4 times higher among respondents with PTSD than among those without PTSD (e.g., 47.9%–48.5% for major depressive episode in subjects with PTSD versus 11.7%–18.8% for those without PTSD) (49). Similarly, rates of anxiety disorders other than PTSD were twice as high or more among those with PTSD (e.g., 7.3%–31.4% for a variety of specific anxiety disorders) than among those without PTSD (e.g., 1.9%–14.5% for the same range of disorders) (68). Finally the same study reported alcohol abuse/dependence to be up to twice as high among those with PTSD (e.g., 51.9% for men and 27.9% for women) compared to individuals without PTSD (e.g., 34.4% for men and 13.5% for women) (49).

TREATMENT INDICATORS

Indicators for assessing the quality of treatment should ideally be derived from experimental treatment trials, preferably RCTs. However, in the absence of such trials, clinicians must rely on clinical experience augmented by data from observational and retrospective studies and expert consensus. Evidence-based practice guidelines provide clinicians with a valuable clinical resource by compiling and processing the most recent scientific knowledge and expert consensus for the treatment and management of selected disorders. Well-established practice guidelines such as those developed by APA and the VA/DoD, that have been referenced here, use a rigorous standardized process for searching the literature, data extraction, and synthesis (35, 69). For ease of use, recommendations are then graded based on the level of supporting evidence. For example, Appendix C includes the level of clinical confidence/grade for each of the recommendations based on the VA/DoD and APA practice guidelines, and the definition associated with each level/grade.

PHARMACOTHERAPY

The APA and VA/DoD guidelines uniformly recommend the initiation of serotonin-specific reuptake inhibitor antidepressants (SSRIs) as first-line treatment for PTSD (34, 35). However, the recent Guideline Watch (36) and Institute of Medicine report (70), although still supporting use of SSRIs for PTSD among civilians, have found less RCT evidence to support these medications for the treatment of combat-related trauma. There is also less RCT evidence supporting the use of other antidepressants (tricyclic antidepressants, monoamine oxidase inhibitors, and non-SSRI second-generation antidepressants) (36). Expert consensus plus observational studies suggest consideration of an antidepressant trial of at least 12 weeks at adequate doses before the therapeutic regimen is changed and consideration of long-term antidepressant maintenance treatment as clinically indicated. In terms of other potential treatment strategies, there is growing evidence to support the use of prazosin specifically for treatment of PTSD-associated nightmares (71). In addition, recent data suggest that adjunctive treatment with a second-generation antipsychotic agent may be helpful in patients with a partial response to an SSRI or other second-generation antidepressant. However, first-generation antipsychotics should not be used in the management of PTSD. Current evidence also recommends against long-term use of benzodiazepines to manage core PTSD symptoms or as monotherapy, especially given the potential for misuse/abuse and the lack of strong evidence of efficacy. There is, as yet, insufficient evidence to recommend the use of anticonvulsants or primary pharmacotherapeutic prophylaxis of PTSD.

PSYCHOTHERAPY

There is strong RCT evidence supporting the use of exposure-based therapies including exposure-based cognitive behavioral therapy, cognitive processing therapy, prolonged exposure therapy, and brief exposure therapy for civilians with PTSD exposed to trauma (both civilian and wartime) and for women with PTSD associated with sexual assault (34–36). Current recommendations suggest use of trauma-focused cognitive behavior therapy as a first-line treatment for PTSD (36), which is typically delivered on an individual basis for 8–12 sessions of 90 minutes each (38). Exposure-based therapies, however, are not indicated and should be used with caution for "patients living in dangerous situations (e.g., domestic violence) or for patients with current suicidal ideation, substance abuse not in stable remission, comorbid psychosis, or health problems that preclude exposure to intense physiological arousal" (35).

RCT evidence has suggested that eye movement desensitization and reprocessing treatment may be efficacious for PTSD (36). There is also some RCT evidence supporting the use of stress inoculation therapy for PTSD related to sexual assault (36). Imagery Rehearsal Therapy may be considered for treating nightmares and sleep disruption associated with PTSD. There is strong evidence against the use of psychological debriefing as it may have long-term adverse consequences and has not shown any apparent benefit.

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DISCLOSURE OF OFF-LABEL USE OF MEDICATION

Medications discussed in this manuscript derived from the APA and the VA/DOD practice guidelines may not have an indication from the U.S. Food and Drug Administration (FDA) for the treatment of PTSD. To date sertraline and paroxetine are the only medications approved by the FDA to treat PTSD. Decisions about off-label use should be guided by the evidence provided in the APA or the Va/DoD practice guidelines, other scientific literature, and clinical experience. Medications which have not received FDA approval for any indication are not included in this manuscript.

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NOTES

Appendices A and B: Performance in Practice Sample Tools

Appendices A and B provide sample PIP tools, each of which is designed to be relevant across clinical settings (e.g., inpatient, outpatient), straightforward to complete, and usable in a pen-and-paper format to aid adoption. Although the MOC program requires review of at least 5 patients as part of each PIP unit, it is important to note that larger samples will provide more accurate estimates of quality within a practice.

Appendix A provides a retrospective chart review PIP tool that assesses the care given to patients with PTSD. Although Appendix A is designed as a self-assessment tool, these forms could also be used for retrospective peer-review initiatives. As with other retrospective chart review tools, some questions on the form relate to the initial assessment and treatment of the patients whereas others relate to subsequent care. In general, treatment options for newly diagnosed patients who are being treated for the first time should judiciously follow the first-line evidence-based treatment recommendations. On occasion, however, there may be appropriate clinical reasons for deviation from recommended care including: patient's prior response or reaction to a similar class of pharmacologic agents, differential diagnoses, psychiatric or medical co-occurring conditions, and patient preferences.

Appendix B provides a prospective review form. It is intended to provide a cross-sectional assessment that could be completed immediately following a patient's visit. As currently formatted, Appendix B is designed to be folded in half to allow real-time feedback based upon answers to the initial practice-based questions. This approach is more typical of clinical decision support systems that provide real-time feedback on the concordance between guideline recommendations and the individual patient's care. Such feedback provides the opportunity to adjust the treatment plan of an individual patient to improve patient-specific outcomes. In the future, the same data recording and feedback steps could be implemented via a web-based or electronic record system enhancing integration into clinical workflow. Data from this form could also be used in aggregate to plan and implement broader quality improvement initiatives. For example, if self-assessment using the sample tools suggests that signs and symptoms of PTSD are inconsistently assessed, consistent use of more formal rating scales such as the PTSD Checklist (PCL) (35, 52) could be considered.

Each of the sample tools attempts to highlight aspects of care that have significant public health implications (e.g., suicide, substance use disorders) or for which gaps in guideline adherence are common. Appendix C includes evidence-based recommendations derived from the APA (34, 36) and the VA/DoD (35) practice guidelines and summarizes specific aspects of care that are measured by these sample PIP tools. Quality improvement suggestions that arise from completion of these sample tools are intended to be within the control of individual psychiatrists rather than dependent upon other health care system resources.

After using one of the sample PIP tools to assess the pattern of care given to a group of 5 or more patients with PTSD, the psychiatrist should determine whether specific aspects of care need to be improved. For example, if the presence or absence of co-occurring psychiatric disorders has not been assessed or if these disorders are present but not addressed in the treatment plan, then a possible area for improvement would involve greater consideration of co-occurring psychiatric disorders, which are common in patients with PTSD.

These sample PIP tools can also serve as a foundation for more elaborate approaches to improving psychiatric practice as part of the MOC program. If systems are developed so that practice-related data can be entered electronically (either as part of an electronic health record or as an independent web-based application), algorithms can suggest areas for possible improvement using specific, measurable, achievable, relevant and time-limited objectives. Such electronic systems could also provide links to journal or textbook materials, clinical practice guidelines, patient educational materials, drug-drug interaction checking, evidence-based tool kits or other clinical materials. In addition, future work will focus on developing more standardized approaches to integrating patient and peer feedback with personal performance review, developing and implementing programs of performance improvements and reassessment of performance and patient outcomes.

Appendix A: Retrospective Chart Review Performance in Practice Tool for the Care of Patients with Posttraumatic Stress Disorder (PTSD)

The purpose of this clinical tool is to complement the physician's clinical judgment with a visual aid highlighting key evidence-based recommendations for the assessment and treatment of PTSD and to provide an opportunity to evaluate potential reasons for deviation from recommended care.

Instructions: Choose the last 5 patients you treated with a diagnosis of PTSD. If the answer for a given item is "Yes," or "Not Applicable," place a check mark in the appropriate box; if the answer to the question is "No" or "Unknown," leave the box unchecked. After reviewing the charts of all 5 patients, complete the final column.
Scoring: Any rows for which the total is less than 5 reflect clinical areas for the physician to examine whether clinical or other circumstances explain why clinical practices are not consistent with recommended care, or whether changes in practice can strengthen the provision of evidence-based care.

	Patient					
I. ASSESSMENT for PTSD	**#1**	**#2**	**#3**	**#4**	**#5**	
Check box if new patient initiating treatment	☐	☐	☐	☐	☐	*# of new patients*
Did the initial evaluation assess:						**Number of patients with check mark in row?**
a. Exposure to trauma (see Appendix C: recommendation II.1)	☐	☐	☐	☐	☐	__/5
b. Signs/symptoms of PTSD	☐	☐	☐	☐	☐	__/5
c. PTSD type: Acute, Chronic, PTSD w/ delayed onset	☐	☐	☐	☐	☐	__/5
d. Risk factors for PTSD (see Appendix C: recommendation II.3 to 5)	☐	☐	☐	☐	☐	__/5
e. Traumatic brain injury	☐	☐	☐	☐	☐	__/5
f. Suicidal ideation/plans/intentions	☐	☐	☐	☐	☐	__/5
g. Suicidal behavior/attempts	☐	☐	☐	☐	☐	__/5
h. Non-suicidal self-injurious behaviors	☐	☐	☐	☐	☐	__/5
i. Nicotine use/abuse/dependence	☐	☐	☐	☐	☐	__/5
j. Alcohol use/abuse/dependence	☐	☐	☐	☐	☐	__/5
k. Other substance use/abuse/dependence	☐	☐	☐	☐	☐	__/5
l. Presence of other co-occurring psychiatric disorders	☐	☐	☐	☐	☐	__/5
m. Presence of general medical conditions	☐	☐	☐	☐	☐	__/5
n. Functional impairment	☐	☐	☐	☐	☐	__/5
o. Prior history of hospitalization	☐	☐	☐	☐	☐	__/5
p. Patient's prior response to treatment	☐	☐	☐	☐	☐	__/5
q. Availability or lack of social support	☐	☐	☐	☐	☐	__/5
II. TREATMENT / MANAGEMENT of PTSD						
Does the treatment plan currently include, refer, or consider the following treatment management approaches for PTSD?						
Check if any one of the "a" or "b" psychotherapeutic interventions are provided						
a. Exposure-based psychotherapeutic first-line interventions for PTSD (e.g. Exposure-based Cognitive Behavioral Therapy, Cognitive Processing Therapy, Prolonged Exposure Therapy, Brief Exposure Therapy (4 to 5 sessions))	☐	☐	☐	☐	☐	__/5
OR						
b. Other psychotherapeutic interventions considered for PTSD (e.g., Stress Inoculation Therapy, Eye Movement Desensitization and Reprocessing, Imagery Rehearsal Therapy)						
c. Appropriate psychopharmacologic intervention for PTSD (e.g., SSRIs, SNRIs, TCAs, MAOIs)	☐	☐	☐	☐	☐	__/5
e. Ongoing follow-up and monitoring (e.g. at least one follow-up every 3 months)	☐	☐	☐	☐	☐	__/5
f. Patient/family education about illness/treatments	☐	☐	☐	☐	☐	__/5
g. Treatment for co-occurring substance use disorders	☐	☐	☐	☐	☐	__/5
h. Treatment for other co-occurring psychiatric disorders	☐	☐	☐	☐	☐	__/5

Appendix B: Sample "Real-Time" Performance-in-Practice (PIP) Tool for Patients with Posttraumatic Stress Disorder (PTSD)

This "real-time" PIP tool is intended to be a prospective cross-sectional assessment that could be completed immediately following a patient visit. As currently formatted, the tool is designed to be folded in half to allow real-time feedback based upon answers to initial practice based questions.

To establish a diagnosis of PTSD (refer to DSM-IV-TR for the diagnostic criteria), a thorough assessment of the patient's current and prior exposure to traumatic event(s) is required. The patient's response to the traumatic event at the time of trauma must involve intense fear, helplessness, or horror (Criterion A) and involve persistent re-experiencing (one or more symptoms in Criterion B); persistent avoidance of stimuli associated with the trauma and numbing of general responsiveness (three or more symptoms in Criterion C), and persistent symptoms of increased arousal (two or more symptoms in Criterion D). There need to be associated change in functioning and the duration of disturbance of one month or more.

Patient's Sociodemographic Characteristics				
Age:_____ Sex: ☐ Male ☐ Female				The treatment plan should consider factors such as age, sex, ethnicity, culture and religious/spiritual beliefs, which may require a modified treatment approach.
Racial/ethnic background	Yes ☐	No ☐	Unknown ☐	
Highest level of education	☐	☐	☐	
Marital status	☐	☐	☐	
Employment status	☐	☐	☐	
Assess the following:				**Assessment of risk factors should include:** *Pre-trauma Risk Factors for ASD/PTSD:* prior exposure to trauma, adverse childhood experiences, younger age, minority race, female gender, low socioeconomic or educational status, psychiatric disorders or personality dimensions, cognitive factors.
Assess for PTSD Specific pre-, peri-, and post-trauma events	Yes	No	Unknown	
Most recent trauma types (motor vehicle crashes, violence, combat-related, sexual-related, other)	☐	☐	☐	
Severity of trauma (mild, moderate, severe)	☐	☐	☐	
Recency of exposure to trauma (time elapsed since exposure)	☐	☐	☐	*Peri-trauma Risk Factors for ASD/PTSD* including: severity of trauma, peri-traumatic dissociation, young age at the time of exposure, and acute stress reaction.
Level of distress at the time of trauma/peri-traumatic dissociation (mild/moderate/severe)	☐	☐	☐	
History of trauma exposure (i.e., type, severity, frequency, adverse childhood experiences)	☐	☐	☐	*Post-trauma Risk Factors for ASD/PTSD* including: resource loss, lack of social support, ongoing life stressors, bereavement, psychosocial difficulties.
Since exposure to most recent trauma, is patient experiencing any of the following?	Yes	No	Unknown	If associated symptoms of PTSD are not routinely assessed (as indicated by multiple unknown symptoms of PTSD), consider using a standardized tool for assessing and recording PTSD symptoms such as the 17-item PTSD Check List (PCL) (52) or the Clinician Administered PTSD Scale (CAPS) (72).
Nightmares about the experience/ thinking about it when patient did not want to	☐	☐	☐	
Patient tries hard not to think about the trauma or goes out of his/her way to avoid situations that remind them of it	☐	☐	☐	
Patient is constantly on guard, watchful, easily startled	☐	☐	☐	
Patient feels numb or detached from others, activities, or their surroundings	☐	☐	☐	

Appendix B: Sample "Real-Time" Performance-in-Practice (PIP) Tool for Patients with Posttraumatic Stress Disorder (PTSD) (p. 2 of 6)

Current PTSD Diagnosis	Acute ☐	Chronic ☐	Delayed Onset ☐	If the patient has clinically significant symptoms of PTSD consider initiating treatment. If the patient is currently receiving treatment, depending on the duration of treatment and persistence of symptoms a change in the treatment plan may be indicated. Consideration may be given to changing a medication dose, modifying or adding a medication, or revising the primary diagnosis.
Is the patient experiencing clinically significant distress or impairment in social, occupational, or other important areas of functioning that is a change from their pre-trauma level of functioning?	Yes ☐	No ☐	Unknown ☐	The patient's level of functioning is important in making a diagnosis of PTSD, but is equally important in examining response to treatment. It is also a primary focus of patients and their families as well a major determinant of illness related disability.
Length of time in treatment with psychiatrist or other clinicians for current PTSD:	_____ months			
Co-Occurring Psychiatric Conditions	Current	Past	Unknown	Co-occurring psychiatric disorders are common in patients with PTSD and need to be considered when planning care.
Other Anxiety Disorder(s)	☐	☐	☐	
Depressive Disorder(s)	☐	☐	☐	
Bipolar Disorder	☐	☐	☐	
Psychotic Disorder(s)	☐	☐	☐	
Nicotine Dependence	☐	☐	☐	Tobacco use abuse/dependence contributes to significant morbidity and mortality among smokers, yet can be treated effectively.
Alcohol Use Disorder	☐	☐	☐	
Other Substance Use Disorder	☐	☐	☐	
Adjustment Disorder	☐	☐	☐	
Somatoform Disorder	☐	☐	☐	
Sleep Disorder	☐	☐	☐	
Personality Disorder	☐	☐	☐	
Other	☐	☐	☐	
Other psychiatric concerns:	Current	Past	Unknown	
Impaired cognition	☐	☐	☐	
Smoking/Nicotine	☐	☐	☐	
Alcohol use problem	☐	☐	☐	Use of alcohol or other substances can be problematic among patients with PTSD and can influence treatment response and suicide risk even in the absence of substance use disorder.
Other substance use problem	☐	☐	☐	
Sleep problems	☐	☐	☐	
	Yes	No	N/A	
If the patient has current or past co-occurring psychiatric disorders, are these being addressed in the treatment plan?	☐	☐	☐	
If the patient uses tobacco, has he/she been encouraged to quit?	☐	☐	☐	

Appendix B: Sample "Real-Time" Performance-in-Practice (PIP) Tool for Patients with Posttraumatic Stress Disorder (PTSD) (p. 3 of 6)

Presence of traumatic brain injury (TBI):		Current ☐	Past ☐	Unknown ☐	Assessment of TBI should include, but not be limited to, the following: history, symptoms, neurological exam, neuro-cognitive function, and psychological function.
If TBI present, rate the severity	Mild ☐	Moderate ☐	Severe ☐	Unknown ☐	**Mild TBI** = loss of consciousness 0 to 30 min, alteration of consciousness/mental state up to 24 hours, amnesia 0-1 day.
Suicidal/Self Injurious Behaviors		Yes	No	Unknown	**Moderate TBI** = loss of consciousness >30 min and <24 hours, alteration of consciousness/mental state >24 hours, amnesia >1 day and <7 days
Has patient had suicidal ideation or behavior in the past 90 days?		☐	☐	☐	**Severe TBI** = loss of consciousness >24 hours, alteration of consciousness/mental state >24 hours, amnesia >7 days
If Yes:					
Mild/intermittent ideation:		☐	☐	☐	
Severe/persistent ideation:		☐	☐	☐	
Made a suicide plan:		☐	☐	☐	
Self-injurious behavior *without intention* to die (e.g. cutting behavior)		☐	☐	☐	
Self-injurious behavior *with intention* to die (e.g. suicide attempt)		☐	☐	☐	
Number of previous suicide attempts (enter 0 if no previous history)		_____# attempts			A history of hospitalization, prior suicide attempts or other self-harming behaviors is relevant in estimating suicide risk.
Does patient have history of violent or aggressive behaviors toward others?		☐	☐	☐	The presence or absence of aggressive behaviors can also be important to risk assessment.
Was patient ever hospitalized for the treatment of a psychiatric disorder?		☐	☐	☐	
Does this patient have a family history of mental illness?		☐	☐	☐	

Appendix B: Sample "Real-Time" Performance-in-Practice (PIP) Tool for Patients with Posttraumatic Stress Disorder (PTSD) (p. 4 of 6)

Axis III—General Medical Conditions (including side effects of meds):	Yes	No	Unknown	
Trauma-related injury	☐	☐	☐	For many patients with PTSD, the trigger traumatic event may also result in physical injury (eg., motor vehicle crashes, violence), consequently the patient's health status should be a particular focus of care. When present, general medical conditions and their treatments can exacerbate existing symptoms or require adjustments in medication doses. Medications prescribed for psychiatric disorders can interact with those for general medical conditions and can produce side effects in various organ systems.
Problems with pain	☐	☐	☐	
Hypertension	☐	☐	☐	
Cardiovascular disorders	☐	☐	☐	
Asthma/COPD	☐	☐	☐	
Renal disorders	☐	☐	☐	
Hepatic disorders	☐	☐	☐	
Infectious diseases (e.g., HIV, Hepatitis C)	☐	☐	☐	
Thyroid disease	☐	☐	☐	
Seizure disorder	☐	☐	☐	
Sleep apnea	☐	☐	☐	
Obesity	☐	☐	☐	
Other	☐	☐	☐	
If the patient has current general medical conditions, has contact been made with the patient's primary care physician?	☐	☐	☐	Weight gain is common with psychiatric medications and obesity contributes to morbidity and mortality. Sleep apnea can be an unrecognized complication of obesity that can be exacerbated by sedating medications.
If obesity is present:				
Is the patient's weight being monitored?	☐	☐	☐	
Have nutrition/exercise been discussed?	☐	☐	☐	
Axis IV—and other psychosocial and environmental problems	Yes	No	Unknown	Psychosocial rehabilitation services are effective in improving quality of life. Consider psychosocial rehabilitation services including: health education, skills training, supported housing, family skills training, social skills training, supportive employment intervention, vocational counseling, occupational/recreational therapy, peer support group
Lack of social support	☐	☐	☐	
Housing problems	☐	☐	☐	
Economic problems	☐	☐	☐	
Occupational/school problems	☐	☐	☐	
Marital problems	☐	☐	☐	
Other relationship problems	☐	☐	☐	
Problem with access to healthcare services	☐	☐	☐	
Problems related to interaction with the legal system	☐	☐	☐	
Ongoing life stressors	☐	☐	☐	
Other psychosocial problems	☐	☐	☐	

Appendix B: Sample "Real-Time" Performance-in-Practice (PIP) Tool for Patients with Posttraumatic Stress Disorder (PTSD) (p. 5 of 6)

Pharmacologic treatments provided (by psychiatrist or other clinicians):	Dose	Route	
Current psychiatric medication(s):			
SSRIs:			SSRIs are considered the first-line psychopharmacologic intervention. However, SSRIs are no longer recommended with the same level of confidence for combat-related PTSD as for non-combat-related PTSD. (36)
SNRIs:			There are recommendations against: long term use of benzodiazepines to manage core PTSD symptoms; use of benzodiazepines as monotherapy; and use of first generation antipsychotics for the management of PTSD. (34, 35)
TCAs:			Knowledge of medications that patients are receiving for treatment of non-psychiatric disorders is important in assessing potential drug-drug interactions and interpreting reported side effects of treatment. Such information can also alert the clinician to the presence of general medical conditions that may not have been reported by the patient (e.g., hypertension, hyperlipidemias) or to side effects of treatment that may require changes in medications or medication doses.
MAOIs:			
Other (Specify:)			
Current non-psychiatric medication(s):			With the fragmentation of health care, medications that were intended to be tapered may have been continued inadvertently. Continued use of non-essential medications increases costs as well as side effects and drug-drug interactions. Also consider if any of the medications require blood level monitoring or other follow-up laboratory testing. If the patient has residual symptoms, assess the adequacy of the medication dose and determine if changes in medication or dose are indicated.
In reviewing the patient's list of psychiatric medications:			
Has the potential for drug-drug interactions been assessed?	Yes ☐	No ☐	
Is each medication essential?	Yes ☐	No ☐	

Appendix B: Sample "Real-Time" Performance-in-Practice (PIP) Tool for Patients with Posttraumatic Stress Disorder (PTSD) (p. 6 of 6)

Psychosocial treatments provided (by psychiatrist or other clinicians):	Current	Past	Unknown	
Exposure-based Cognitive Behavioral Therapy	☐	☐	☐	Exposure-based therapies (e.g. exposure-based cognitive behavioral therapy, cognitive processing therapy, prolonged exposure therapy, brief exposure therapy) are considered first-line evidence-based psychotherapeutic interventions. However, exposure therapies are not indicated and should be used with caution for "patients living in dangerous situations (e.g. domestic violence) or for patients with current suicidal ideation, substance abuse not in stable remission, comorbid psychosis, or health problems that preclude exposure to intense physiological arousal." (35)
Cognitive Processing Therapy	☐	☐	☐	
Prolonged Exposure Therapy	☐	☐	☐	
Brief Exposure Therapy	☐	☐	☐	
Stress Inoculation Therapy	☐	☐	☐	
Imagery Rehearsal Therapy	☐	☐	☐	
Eye Movement Desensitization and Reprocessing	☐	☐	☐	
Treatment for nicotine problem	☐	☐	☐	There is strong evidence against the use of psychological debriefing as it may have long term adverse consequences without any apparent benefits. (34, 35)
Treatment for alcohol problem	☐	☐	☐	
Treatment for other substance use problem	☐	☐	☐	
Treatment for sleep problem	☐	☐	☐	
Case Management or Care Management	☐	☐	☐	
Self-management approaches	☐	☐	☐	
Patient/family psychoeducation	☐	☐	☐	
Other	☐	☐	☐	
In reviewing the psychosocial treatment approaches that are being used:				
Does the treatment approach adequately target core symptoms: Yes ☐ No ☐				
Are modifications needed to address residual symptoms? Yes ☐ No ☐				
Estimated degree of adherence to treatment: ☐ Good ☐ Fair ☐ Poor ☐ Unknown				Difficulty adhering to treatment is a common cause of inadequate response. Treatment of PTSD can be enhanced by assessing adherence and discussing barriers to adherence such as costs, concerns about medication use, complexity and side effects of medication regimens and obstacles to keeping appointments (e.g., transportation, childcare, schedule constraints).
Estimated magnitude of treatment-related side effects: ☐ Mild ☐ Moderate ☐ Severe ☐ Unknown				
Side effects experienced: _____				
Is additional education or discussion of the treatment plan needed to enhance the patient's understanding and adherence?	Yes ☐	No ☐		Common side effects of antidepressant medications include sleep-related effects (i.e., sedation, insomina), gastrointestinal effects (e.g., diarrhea, constipation, nausea), restlessness/anxiety, sexual dysfunction, headache, and anticholinergic effects. Effects on cardiac conduction can be a particular problem with tricyclic antidepressants. For all antidepressants, the FDA has issued warnings that the potential for increased suicidal thoughts or behaviors with antidepressant therapy in individuals under the age of 25 must be balanced against the benefits of treatment.
Based on the severity of the patient's PTSD, is patient receiving evidence-based psychopharmacological and/or psychosocial treatments that are recommended by the practice guidelines?	☐	☐		
Were patient/family preferences taken into consideration in the development of treatment plan?	☐	☐		
Are any changes in the treatment plan likely as a result of using these PIP tools?	☐	☐		

Appendix C: Evidence-Based Assessment and Treatment Recommendations for Posttraumatic Stress Disorder

I. Definition

***Trauma*:** An extreme traumatic stressor involving direct personal experience . . . the person's response to the event must involve intense fear, helplessness, horror

***Acute Stress Reaction (ASR)*:** . . . onset of some signs and symptoms may be simultaneous with the trauma or may follow after an interval of hours or days . . . symptoms not resolved within 4 days after the event, after ruling out other disorders

***Acute Stress Disorder (ASD)*:** clinically significant symptoms >2 days, but <1 month after exposure

***Post Traumatic Stress Disorder (PTSD)*:** clinically significant symptoms lasting more than 1 month after exposure to a trauma

***Acute PTSD*:** clinically significant symptoms lasting >1 month, but <3 months

***Chronic PTSD*:** clinically significant symptoms lasting >3 months after exposure to trauma

***PTSD with delayed onset*:** clinically significant symptoms at least 6 months after exposure to trauma‖ (35)

II. Assessment

Key Evidence-Based Guideline Recommendations	DoD/VA Guideline 2004† (35)	APA Guideline 2004‡ (34)
	Final Grade	Level of Clinical Confidence
1. Assess for trauma exposure including: time of onset, recency (time elapsed since exposure), type, nature, severity, history, frequency, course, and level of distress.	**B**	**I**
2. Screen patients for PTSD (screen for recent or remote trauma exposure. In military populations the VA/DoD guidelines recommend initial screening followed by screening annually or more if clinically indicated).	**B**	**I**
3. Assess for pre-trauma risk factors for ASD/PTSD including: prior exposure to trauma, adverse childhood, younger age, minority race, female gender, low socioeconomic or educational status, psychiatric disorders or personality dimensions, cognitive factors.	**B**	**I**
4. Assess for peri-trauma risk factors for ASD/PTSD including: severity of trauma, peri-traumatic dissociation, youth at time of exposure	**B**	**I**
5. Assess for post-trauma risk factors for ASD/PTSD including: resource loss, lack of social support, ongoing life stressors, bereavement, psychosocial difficulties	**B**	**I**
6. Assess for co-occurring physical or psychiatric disorders (depression, alcohol, other substance, other anxiety disorders, TBI, commonly co-occur with PTSD)	**B**	**I**
7. Assess risk for suicide or harm to others	**B**	**I**
8. Assess for functional impairment		**I**

Appendix C: Evidence-Based Assessment and Treatment Recommendations for Posttraumatic Stress Disorder (p. 2 of 3)

III. Treatment/Management:

Based on the 2009 APA Guideline Watch, best evidence from recent studies bolsters support for exposure-based psychotherapies but also pharmacological interventions in many circumstances. (36)

Key Evidence-Based Guideline Recommendations	DoD/VA Guideline 2004†	APA Guideline 2004‡
	Final Grade	Level of Clinical Confidence
A. Pharmacotherapy		
1. Pharmacotherapy may be the first-line intervention for acutely traumatized patients		II
2. SSRIs as first-line for the treatment of PTSD Based on most recent evidence outlined in the 2009 APA Guideline Watch for PTSD: a. "Evidence for superiority of SSRIs and SNRIs over placebo for *non-combat-related* PTSD . . . Evidence of efficacy most convincing for the SSRIs, across all symptom clusters and for co-occurring depression and disability." b. "SSRIs may be no longer recommended with the same level of confidence for veterans with *combat-related PTSD* as for patients with non-combat-related PTSD." (36)	A	I
3. Second-line treatment for PTSD include TCAs and MAOIs	B	II
4. Consider antidepressant trial of 12 weeks before changing the therapeutic regimen	B	
5. Propranolol may be considered for treatment of immediate post-event stress	B	
6. Consider augmentation with prazosin for the management of nightmares and other symptoms of PTSD (36)	C	
7. Pharmacotherapy for treatment for ASD—Impiramine for hyperarousal/excessive arousal/panic attacks	B	
8. Other pharmacotherapy for treatment of ASD a. Benzodiazepines for sleep disturbance/insomnia/hyperarousal/excessive arousal/panic attacks b. Chloral hydrate for sleep disturbance/insomnia c. Propranolol for hyperarousal/excessive arousal/panic attacks	C	III
9. Consider maintenance treatment, reassess periodically	C	
10. Insufficient but increasing evidence in use of atypical antipsychotics for the treatment of PTSD *Based on the most recent evidence outline in the 2009 APA Guideline Watch for PTSD, "data are encouraging for adjunctive treatment with a 2nd generation antipsychotic in patients with partial response to an SSRI or SNRI, including for co-occurring psychotic symptoms." (36)*	Insufficient evidence	III
11. Recommend against: a. Long term use of benzodiazepines to manage core symptoms of PTSD b. Use of benzodiazapine as monotherapy c. First generation antipsychotics in the management of PTSD	Insufficient evidence	III

Appendix C: Evidence-Based Assessment and Treatment Recommendations for Posttraumatic Stress Disorder (p. 3 of 3)

Key Evidence-Based Guideline Recommendations	DoD/VA Guideline 2004† Final Grade	APA Guideline 2004‡ Level of Clinical Confidence
B. Psychotherapy: Based on most recent evidence outline in the 2009 APA Guideline Watch for PTSD, support for "exposure-based CBTs such as CPT and prolonged exposure therapy when delivered in individual formats" (36)		
1. Cognitive Behavioral Therapy (CBT) is an effective treatment for core symptoms of acute and chronic PTSD		**I**
2. Brief intervention of CBT (4 to 5 sessions) for ASD	**A**	**II**
3. Cognitive Therapy (CT) is effective with civilian men and women exposed to combat and non-combat trauma	**A**	**II**
4. CT is effective with military and veteran with combat- and non-combat-related PTSD	Insufficient evidence	
5 CT is effective for women with PTSD associated with sexual assault	**A**	
6. Exposure Therapy (ET) has shown to be effective in the treatment of PTSD	**A**	**II**
7. Exposure therapy may not be indicated and should be used with caution for individuals with following conditions: "living in dangerous situations (e.g. domestic violence), current suicidal ideation, substance abuse not in stable remission, comorbid-psychosis, or health problems that preclude exposure to intense physiological arousal." (35)	Ineffective, or may be harmful	
8. Eye Movement Desensitization and Reprocessing (EMDR) has shown to be effective in the treatment of PTSD	**A**	**II**
9. Stress Inoculation Training (SIT) is effective as a treatment for PTSD related to sexual assault	**A**	**II**
10. Imagery Rehearsal Therapy (IRT) considered for treatment of PTSD (nightmares and sleep disruption in particular)	**B**	**II**
11. Psychodynamic psychotherapy for the treatment of patient with PTSD/ complex PTSD	**B**	**II**
12. Hypnosis may be used to alleviate PTSD symptoms	**B**	Insufficient evidence
13. Psychological debriefing is ineffective and has adverse long term effects	Ineffective, or may be harmful	Not recommended
C. Psychosocial Rehabilitation Services		
1. Psychosocial rehabilitation services to include health education, skills training, supported housing, family skills training, social skills training, supportive employment, vocational counseling, occupational/recreational therapy, peer support group should be considered		

† DoD/VA Quality Rating:
Reference: Post-traumatic Stress Disorder VA/DoD Clinical Practice Guidelines: http://www.ncptsd.va.gov/ncmain/doclist.jsp
Final Grade of Recommendation
A A strong recommendation that the intervention is always indicated and acceptable
B A recommendation that the intervention may be useful/effective
C A recommendation that the intervention may be considered
May be considered not useful/effective, or may be harmful
Insufficient evidence to recommend for or against—the clinician will use clinical judgment
‡ **APA Clinical Confidence Rating:**
Reference: The American Psychiatric Association Practice Guideline for the Treatment of Patients with Acute Stress Disorder and Post-traumatic Stress Disorder: http://www.psych.org/psych_pract/treatg/pg/ASD PTSD_05-15-06.pdf
I Recommended with substantial clinical confidence.
II Recommended with moderate clinical confidence.
III May be recommended on the basis of individual circumstances.
§ APA Guideline Watch (January 2009)—Reference #36

Sample "Real-Time" Performance in Practice Tool
for Patients with Posttraumatic Stress Disorder (PTSD)
Survey Form and CME Certification Begin date April 2009,
End date December 31, 2011.

To earn CME credit for this ***Survey Program***, psychiatrists should use the **Sample Real Time Performance in Practice Tool** (Appendix B) as indicated. After using the performance in practice tool for at least 5 patients, participants should fully complete this survey and send it by mail to APACME 1000 Wilson Boulevard, Suite 1825 Rosslyn VA 22209, or fax to 703 907 7849, or send by email to educme@psych.org.

Objective: After completion of this activity psychiatrists will have the foundation for subsequent performance improvement initiatives aimed at enhancing outcomes for patients with PTSD.

The APA is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians. APA designates this educational activity for a maximum of 5 AMA PRA Category 1 credits. Physicians should only claim credit commensurate with the extent of their participation in the activity.

		1	2	3	4	5	
1. Overall, I am satisfied with the usefulness of this PIP tool (Appendix B) in assessing my practice patterns.	Strongly disagree	0	0	0	0	0	Strongly agree
2. This PIP tool was difficult for me to use.	Strongly disagree	0	0	0	0	0	Strongly agree
3. The questions and information on this PIP tool were worded clearly.	Strongly disagree	0	0	0	0	0	Strongly agree
4. The organization of information on this PIP tool was clear.	Strongly disagree	0	0	0	0	0	Strongly agree
5. I was able to complete this PIP tool rapidly.	Strongly disagree	0	0	0	0	0	Strongly agree
6. Completing this PIP tool had no effect on my knowledge about treating patients with PTSD.	Strongly disagree	0	0	0	0	0	Strongly agree
7. By completing this PIP tool, I have identified at least one way in which I can improve my care of patients.	Strongly disagree	0	0	0	0	0	Strongly agree
8. Completing this PIP tool has helped me to verify that I am providing appropriate care to my patients.	Strongly disagree	0	0	0	0	0	Strongly agree
9. Completing this PIP tool was a good use of my time.	Strongly disagree	0	0	0	0	0	Strongly agree
10. Reviewing my patterns of practice is a good use of my time.	Strongly disagree	0	0	0	0	0	Strongly agree

List the most helpful aspects of this PIP tool (Appendix B):

1.

2.

3.

List the least helpful aspects of this PIP tool (Appendix B):

1.

2.

3.

How do you plan to use the information gained from this self-assessment in your practice?

How might we improve upon this PIP tool in the future?

Additional comments:

_____

Please evaluate the effectiveness of this CME activity.

1. Achievement of educational objectives: YES _____ NO _____

2. Material was presented without bias: YES _____ NO _____

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Number of hours you spent on this activity _____
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Performance in Practice: Sample Tools for the Care of Patients with Major Depressive Disorder

Abstract: To facilitate continued clinical competence, the American Board of Medical Specialties and the American Board of Psychiatry and Neurology are implementing multi-faceted Maintenance of Certification programs, which include requirements for self-assessments of practice. Because psychiatrists may want to gain experience with self-assessment, two sample performance-in-practice tools are presented that are based on recommendations of the American Psychiatric Association's Practice Guideline for the Treatment of Patients with Major Depressive Disorder. One of these sample tools provides a traditional chart review approach to assessing care; the other sample tool presents a novel approach to real-time evaluation of practice. Both tools can be used as a foundation for subsequent performance improvement initiatives that are aimed at enhancing outcomes for patients with major depressive disorder.

Psychiatrists, like other medical professionals, are confronted by a need to maintain specialty specific knowledge despite an explosion in the amount of new information and the ongoing demands of clinical practice. Given these challenges, it is not surprising that researchers have consistently found gaps between actual care and recommended best-practices (1–10). In attempting to enhance the quality of delivered care, a number of approaches have been tried with varying degrees of success. Didactic approaches, including dissemination of written educational materials or practice guidelines, produce limited behavioral change (11–19). Embedding of patient-specific reminders into routine care can lead to benefits in specific quality measures (11, 13–16, 20–23) but these improvements may be narrow in scope, limited to the period of intervention or unassociated with improved patient outcomes (24–27). Receiving feedback after self or peer-review of practice patterns may also produce some enhancements in care (13–15, 23, 28–30). Given the limited effects of the above approaches when implemented alone, the diverse practice styles of physicians and the multiplicity of contexts in which care is delivered, a combination of quality improvement approaches may be needed to improve patient outcomes (14, 19, 28, 29, 31–34).

With these factors in mind, the American Board of Medical Specialties and the American Board of Psychiatry and Neurology are implementing multi-faceted Maintenance of Certification (MOC) Programs that include requirements for self-assessments of practice through reviewing the care of at least 5 patients (35). As with the original impetus to create specialty board certification, the MOC programs are intended to enhance quality of patient care in addition to assessing and verifying the competence of medical practitioners over time (36, 37). Although the MOC phase-in schedule will not require completion of a Performance in Practice (PIP) unit until 2014 (35), individuals may wish to begin assessing their own practice patterns before

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Table 1. Aspects of Major Depressive Disorder Treatment Addressed by Sample Performance-In-Practice Tools

Recommendation	Source of Recommendation[1]	Performance Tool[2]
Identify signs and symptoms of depression	MDD PG	A, B, PCPI
Assess suicidal ideation, plans and intent	MDD PG; SB PG	A, B, PCPI
Identify past or current symptoms of mania or hypomania	MDD PG; BP PG	A, B
Identify past and current substance use disorders, including nicotine, alcohol and other substances	MDD PG; SUD PG; SB PG	A, B
Identify other past and current co-occurring psychiatric disorders	MDD PG	A, B
Identify past and current general medical conditions	MDD PG	A, B
Use treatments that are concordant with practice guideline recommendations (see Appendix A).	MDD PG	A, B, PCPI
Integrate treatment of any substance use disorders or other co-occurring psychiatric disorders with treatment for MDD	MDD PG; SUD PG; SB PG	A, B
Provide education to patients/families about depression and its treatment	MDD PG	A, B
Consider factors such as age, sex, ethnicity, cultural or religious beliefs in planning treatment	MDD PG	B
Assess the patient's level of functioning in social, occupational and other important realms	MDD PG	B
Determine whether cognitive impairment is present	MDD PG	B
Determine whether aggressive behavior is present	SB PG	B
Determine whether suicide attempts or other self-harming behaviors are present	MDD PG; SB PG	B
Determine the degree of adherence to treatment	MDD PG	B
Determine if side effects of treatment are present and, if so, which ones	MDD PG	B

[1] Source of Recommendation: MDD PG= Practice Guideline for the Treatment of Patients with Major Depressive Disorder (38); SUD PG= Practice Guideline for the Treatment of Patients with Substance Use Disorders (61); BP PG = Practice Guideline for the Treatment of Patients with Bipolar Disorder (42); SB PG = Practice Guideline for the Assessment and Treatment of Patients with Suicidal Behaviors (62)
[2] Performance Tool: A = Sample retrospective PIP tool of Appendix A; B = Sample prospective PIP tool of Appendix B; PCPI = Major depressive disorder measures of the American Medical Association Physician Consortium for Performance Improvement (63)

that time. To facilitate such self-assessment related to the treatment of depression, this paper will discuss several approaches to reviewing one's clinical practice and will provide sample PIP tools that are based on recommendations of the American Psychiatric Association's Practice Guideline for the Treatment of Patients with Major Depressive Disorder (38).

Traditionally, most quality improvement programs have focused on retrospective assessments of practice at the level of organizations or departments (39). The Healthcare Effectiveness Data and Information Set (HEDIS) measures of the National Committee for Quality Assurance (NCQA) (40) are a commonly used group of quality indicators that measure health organization performance. When used under such circumstances, quality indicators are typically expressed as a percentage that reflects the extent of adherence to a particular indicator. For example, in the quality of care measures for bipolar disorder (41) derived from the American Psychiatric Association's 2002 Practice Guideline for the Treatment of Patients with Bipolar Disorder (42), one of the indicators is that "Patients in an acute depressive episode of bipolar disorder who are treated with antidepressants, [are] also receiving an antimanic agent such as valproate or lithium." In this example, to calculate the percentage of patients for whom the indicator is fulfilled, the numerator will be the "Number of patients in an acute depressive episode of bipolar disorder, who are receiving an antidepressant, and who are also receiving an

anti-manic agent such as valproate or lithium." and the denominator will be the "Number of patients in an acute depressive episode of bipolar disorder who are receiving an antidepressant" (41).

As in the above example, most quality indicators are derived from evidence-based practice guidelines, which are intended to apply to typical patients in a population rather than being universally applicable to all patients with a particular disorder (43, 44). In addition, practice guideline recommendations are mainly informed by data from randomized controlled trials. Patients in such trials may have significant differences from those seen in routine clinical practice (45), including clinical presentation, preference for treatment, response to treatment, and presence of co-occurring psychiatric and general medical conditions (43, 46, 47). These differences may result in treatment decisions for individual patients that are clinically appropriate but not concordant with practice guideline recommendations.

When quality indicators are used to compare individual physicians' practice patterns, quality measures can be influenced by practice size, patients' sociodemographic factors and illness severity as well as other practice-level and patient-level factors. For example, when small groups of patients are receiving care from an individual physician, a small shift in the number of individuals receiving a recommended intervention could lead to large shifts in the resulting rates of concordance with evidence-based care. Without appropriate application of case-mix adjustments, across-practice comparisons may result in erroneous conclusions about the quality of care being delivered (48, 49). For patients with complex conditions or multiple disorders receiving simultaneous treatment, composite measures of overall treatment quality may yield more accurate appraisals than measurement of single quality indicators (50–52).

With the above caveats, however, use of retrospective quality indicators can be beneficial for individual physicians who wish to assess their own patterns of practice. If a physician's self-assessment identified aspects of care that frequently differed from key quality indicators, further examination of practice patterns would be helpful. Through self-assessment, the physician may determine that deviations from the quality indicators are justified, or he may acquire new knowledge and modify practice to improve quality. It is this sort of self-assessment and performance improvement efforts that the MOC PIP program is designed to foster.

Appendices A and B provide sample PIP tools, each of which is designed to be relevant across clinical settings (e.g., inpatient, outpatient), straightforward to complete and usable in a pen-and-paper format to aid adoption. Although the MOC program requires review of at least 5 patients as part of each PIP unit, it is important to note that larger samples will provide more accurate estimates of quality within a practice. Appendix A provides a sample retrospective chart review PIP tool that assesses the care given to patients with major depressive disorder. Although it is designed as a self-assessment tool, this form could also be used for retrospective peer-review initiatives. As with other retrospective chart review tools, some questions on the form relate to the initial assessment and treatment of the patient whereas other questions relate to subsequent care. Appendix B provides a prospective review form that is intended to be a cross-sectional assessment and could be completed immediately following a patient visit. As currently formatted, Appendix B is designed to be folded in half to allow real-time feedback based upon answers to the initial practice-based questions. This approach is more typical of clinical decision support systems that provide real-time feedback on the concordance between guideline recommendations and the individual patient's care. In the future, the same data recording and feedback steps could be implemented via a web-based or electronic record system enhancing integration into clinical workflow (53). This will make it more likely that psychiatrists will see the feedback as interactive, targeted to their needs and clinically relevant. Rather than relying on more global changes in practice patterns to enhance individual patients' care, such feedback also provides the opportunity to adjust the treatment plan of an individual patient to improve patient-specific outcomes (54–56). However, data from this form could also be used in aggregate to plan and implement broader quality improvement initiatives. For example, if self-assessment using the sample tools suggests that signs and symptoms of depression are inconsistently assessed, consistent use of more formal rating scales such as the PHQ-9 (57–59) could be considered.

Each of the sample tools attempts to highlight aspects of care that have significant public health implications (e.g., suicide, obesity, use of tobacco and other substances) or for which gaps in guideline adherence are common. Examples include underdetection and undertreatment of co-occuring substance use disorders (5) and the relatively low concordance with practice guideline recommendations for use of psychosocial therapies and for treatment of psychotic features with MDD (4). Table 1 summarizes specific aspects of care that are measured by these sample PIP tools. Quality improvement suggestions that arise from completion of these sample

tools are intended to be within the control of individual psychiatrists rather than dependent upon other health care system resources.

After using one of the sample PIP tools to assess the pattern of care given to a group of 5 or more patients with major depressive disorder, the psychiatrist should determine whether specific aspects of care need to be improved. For example, if the presence or absence of co-occurring psychiatric disorders has not been assessed or if these disorders are present but not addressed in the treatment plan, then a possible area for improvement would involve greater consideration of co-occurring psychiatric disorders, which are common in patients with MDD.

These sample PIP tools can also serve as a foundation for more elaborate approaches to improving psychiatric practice as part of the MOC program. If systems are developed so that practice-related data can be entered electronically (either as part of an electronic health record or as an independent web-based application), algorithms can suggest areas for possible improvement using specific, measurable, achievable, relevant and time-limited objectives (60). Such electronic systems could also provide links to journal or textbook materials, clinical practice guidelines, patient educational materials, drug-drug interaction checking, evidence based tool kits or other clinical materials. In addition, future work will focus on developing more standardized approaches to integrating patient and peer feedback with personal performance review, developing and implementing programs of performance improvements and reassessment of performance and patient outcomes.

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NOTES

Appendix A. Sample Retrospective Chart Review Performance-in-Practice Tool for the Care of Patients with Major Depressive Disorder

Instructions: Choose 5 patients with a primary diagnosis of major depressive disorder. If the answer to a given question is "Yes", place a check mark in the appropriate box. If the answer to the question is "No" or "Unknown", leave the box unchecked. After reviewing the charts of all 5 patients, complete the final column to determine the relative proportion of patients to whom the recommendation was followed. Any rows for which the total is <2 may be a useful focus for quality improvement efforts.

Guideline recommendation being reviewed	Patient					Number of patients with checkmark in row?
	#1	#2	#3	#4	#5	
Did the initial evaluation assess:						
Signs/symptoms of major depression:	☐	☐	☐	☐	☐	_/5
Suicidal ideation/plans/intent	☐	☐	☐	☐	☐	_/5
Substance use/abuse/dependence						
Nicotine	☐	☐	☐	☐	☐	_/5
Alcohol	☐	☐	☐	☐	☐	_/5
Other substances	☐	☐	☐	☐	☐	_/5
Presence/absence of general medical conditions	☐	☐	☐	☐	☐	_/5
Presence/absence of other co-occurring psychiatric disorders	☐	☐	☐	☐	☐	_/5
History of hypomanic or manic episodes	☐	☐	☐	☐	☐	_/5
Referring to the chart on the reverse side, was treatment concordant with guideline recommendations:						
During the initial acute phase of treatment?	☐	☐	☐	☐	☐	_/5
At the time of the chart review (if the treatment plan differs from that in the initial phase of treatment)?	☐	☐	☐	☐	☐	_/5
Has the treatment plan addressed:						
Patient education about illness/treatments	☐	☐	☐	☐	☐	_/5
Co-occurring substance use disorders	☐	☐	☐	☐	☐	__/__ (# applicable)
Other co-occurring psychiatric disorders	☐	☐	☐	☐	☐	__/__ (# applicable)

Appendix A. (continued) Recommendations for APA Practice Guideline Concordant Treatment of Major Depressive Disorder

Acute Phase of Treatment
(focused on inducing symptom remission)

Clinical presentation	Guideline treatment will include:
Mild MDD (minor functional impairment, few symptoms beyond those required for diagnosis)	Antidepressant therapy alone OR Psychotherapy alone[1] OR Combined treatment with psychotherapy[1] and antidepressant medication[2] (if preferred by patient)
Moderate MDD (greater degree of functional impairment, some symptoms beyond those required for diagnosis)	Antidepressant therapy alone OR Psychotherapy alone[1] OR Combined treatment with psychotherapy[1] and antidepressant medication[2] OR Electroconvulsive therapy (if preferred by the patient and depression is chronic)
Severe MDD (marked interference with social or occupational function; several symptoms in excess of those required for diagnosis)	Antidepressant therapy alone OR Combined treatment with psychotherapy[1] and antidepressant medication[2] OR Electroconvulsive therapy (if preferred by the patient, if the patient has responded preferentially to ECT in the past or if rapid treatment response is essential)
MDD with psychotic features	Combined treatment with an antidepressant and an antipsychotic medication OR Electroconvulsive therapy
MDD with catatonic features	Benzodiazepines OR Electroconvulsive therapy

Continuation Phase of Treatment
(focused on preserving symptom remission over the 16 to 20 weeks after the acute phase of treatment)

If acute phase treatment included:	Guideline concordant treatment will include:
Psychotherapy	Continued psychotherapy
Antidepressant medication	Antidepressant medication of a comparable dose to that used for acute treatment
Electroconvulsive therapy (ECT)	Pharmacotherapy or psychotherapy; continuation ECT is an acceptable alternative if pharmacotherapy or psychotherapy have not preserved remission in past

Maintenance Phase of Treatment
(focused on protecting against recurrence of major depressive episodes)

If treatment to prevent depressive recurrence is indicated[3] and acute treatment included:	Guideline concordant treatment will include:
Psychotherapy	Continued psychotherapy, with a decrease in visit frequency generally occurring if cognitive behavioral therapy or interpersonal therapy are used
Antidepressant medication	Antidepressant medication, generally at a comparable dose to that used for acute treatment
Electroconvulsive therapy (ECT)	Pharmacotherapy or psychotherapy; maintenance ECT may be considered if pharmacotherapy or psychotherapy have not preserved remission in past

[1] The presence of significant psychosocial stressors, intrapsychic conflict, interpersonal difficulties, co-occurring personality disorders or poor adherence with treatment may add to the rationale for treating with psychotherapy.
[2] In patients who have experienced only partial response to adequate trials of medications or psychotherapy alone, combination treatment may be considered.
[3] Indications for maintenance phase treatment are based upon risk of recurrence (including consideration of number of prior episodes; presence of co-occurring conditions; residual symptoms between episodes), severity of episodes (including consideration of suicidal ideas and behaviors; psychotic features; severe functional impairments), side effects experienced during continuation therapy, or patient preferences.

Appendix B. Sample "Real-Time" Performance-in-Practice Tool for Patients with Depression

This "real time" PIP tool is intended to be a prospective cross-sectional assessment that could be completed immediately following a patient visit. As currently formatted, the tool is designed to be folded in half to allow real-time feedback based upon answers to initial practice based questions. Up to 5 hours additional CME credit can be earned through use of the PIP tool and completion of the survey.

Patient Characteristics: Age: ☐			Sex: ☐	
Estimated duration of depressive illness:				
Length of time in treatment for current depressive episode:				
Which of the following is the patient experiencing?				To establish a diagnosis of depression, at least 5 of these symptoms need to be experienced nearly every day over a two week period (with one of the symptoms being either depressed mood or loss of interest or pleasure). However, other symptom assessment intervals may be appropriate when monitoring the presence or absence of symptoms over time. If associated symptoms of depression are not routinely assessed (as indicated by multiple boxes on the left that are checked as unassessed or unknown), consider using a standardized tool for assessing and recording depressive symptoms such as the PHQ-9.
	Yes	No	Unknown	
Little interest or pleasure in doing things?	☐	☐	☐	
Feeling down, depressed, or hopeless?	☐	☐	☐	
Trouble falling or staying asleep, or sleeping too much?	☐	☐	☐	
Feeling tired or having little energy?	☐	☐	☐	
Poor appetite or overeating?	☐	☐	☐	
Negative feelings about self?	☐	☐	☐	
Trouble concentration?	☐	☐	☐	
Psychomotor retardation or agitation?	☐	☐	☐	
Thoughts of suicide, self-harm, or being better off dead?	☐	☐	☐	
If the patient has thoughts of suicide, self-harm or being better off dead, was there a specific inquiry into:				When patients are experiencing thoughts of suicide, self-harm or of being better off dead, more detailed questioning is crucial. The presence of suicide plans or intent indicates a significant increase in suicide risk. An intention to use a highly lethal suicide method (e.g., guns, hanging, jumping) will also confer an increase in suicide risk. When a suicide method is identified, the accessibility of the method is an additional part of the inquiry.
Suicide plans	Yes ☐		No ☐	
Suicide intent	Yes ☐		No ☐	
Suicide methods	Yes ☐		No ☐	
Is the patient experiencing clinically significant distress or impairment in social, occupational, or other important areas of functioning that is a change from their baseline level of function?	Yes ☐	No ☐	Unknown ☐	The presence of clinically significant distress or functional impairment is one of the criteria used in making a diagnosis of depression. In addition to being a primary focus of patients and their families, functional impairment is a major determinant of illness related disability and should be routinely assessed. Distress and impairment are equally important to assess in examining response to treatment. If clinically significant distress or functional impairment are present, consider whether a change in treatment plan is indicated. Depending on the duration of treatment and persistence of symptoms, consideration may be given to changing a medication dose, modifying or adding a psychosocial treatment, changing or adding a medication, or revising the primary diagnosis.

Appendix B. Sample "Real-Time" Performance-in-Practice Tool for Patients with Depression (p. 2 of 6)

Current Depressive Diagnosis:				In establishing a diagnosis of depression, it is essential to determine whether the patient has had multiple depressive episodes or only a single episode of depression as this will have implications for treatment planning. It is also important to identify other co-occurring psychiatric disorders as part of the initial assessment. Such disorders are common in depressed patients and need to be considered in planning care.
Other Psychiatric Diagnoses: Anxiety disorder(s):	Current	Past	Unknown	
	☐	☐	☐	
Nicotine dependence	☐	☐	☐	
Alcohol use disorder:	☐	☐	☐	
Other substance use disorder:	☐	☐	☐	
Personality disorder:	☐	☐	☐	
Other:	☐	☐	☐	
Other psychiatric issues:				The presence of psychotic symptoms in a depressed patient will generally necessitate treatment with an antipsychotic and an antidepressant medication or with ECT.
Psychosis	☐	☐	☐	
Impaired cognition	☐	☐	☐	Cognitive impairment may be associated with depression, medication side effects or other underlying causes. It can also influence adherence with treatment and patient safety.
Problematic use of alcohol or other substances (not meeting criteria for a substance use disorder diagnosis)	☐	☐	☐	Use of alcohol or other substances can be problematic in depressed patients and can influence treatment response and suicide risk even in the absence of a substance use disorder.
Additional psychiatric history:	Yes	No	Unknown	
Hospitalizations	☐	☐	☐	A history of hospitalization, suicide attempts or other self-harming behaviors is relevant in estimating suicide risk. The presence or absence of aggressive behaviors can also be important to risk assessment.
Suicide attempts	☐	☐	☐	
Other self-harming behaviors	☐	☐	☐	
Aggressive behavior	☐	☐	☐	
Mania/Hypomania	☐	☐	☐	If not specifically assessed, manic or hypomanic episodes may not be reported. The treatment of a depressive episode may need to be modified if Bipolar I or Bipolar II disorder is identified, as use of an antidepressant in bipolar patients may be associated with occurrence of hypomanic or manic episodes.
				If any of the aspects of psychiatric diagnosis, symptoms or history on this page are not routinely assessed, increasing rates of assessment may be a useful goal for performance improvement.

Appendix B. Sample "Real-Time" Performance-in-Practice Tool for Patients with Depression (p. 3 of 6)

General Medical Conditions (including side effects of meds):	Yes	No	Unknown	
Hypertension	☐	☐	☐	When present, general medical conditions and their treatments can contribute to depressive symptoms or require adjustments in medication doses. Medications prescribed for psychiatric disorders can interact with those for general medical conditions and can produce side effects in various organ systems (e.g., renal or thyroid difficulties with lithium, seizures with clozapine and other psychotropic medications, glucose dysregulation and hyperlipidemia with second generation antipsychotic medications). In addition, individuals with psychiatric illnesses may be at increased risk of acquiring general medical conditions (e.g., HIV and Hepatitis C acquired through intravenous substance use, cardiovascular and respiratory conditions through smoking). Weight gain is common with psychiatric medications and obesity contributes to morbidity and mortality. Sleep apnea can be an unrecognized complication of obesity that can be exacerbated by sedating medications.
Cardiovascular disorders	☐	☐	☐	
Asthma/COPD	☐	☐	☐	
Renal disorders	☐	☐	☐	
Hepatic disorders	☐	☐	☐	
Infectious diseases (e.g., HIV, Hepatitis C)	☐	☐	☐	
Thyroid disease	☐	☐	☐	
Seizure disorder	☐	☐	☐	
Sleep apnea	☐	☐	☐	If general medical conditions and medication related side effects are not being routinely identified, this may be a useful focus of performance improvement efforts
Obesity	☐	☐	☐	
Diabetes	☐	☐	☐	
Hyperlipidemia	☐	☐	☐	
Other:	☐	☐	☐	
If obesity is present, is the patient's weight being monitored?				
	Yes ☐		No ☐	Given the rise in obesity as a public health problem and the common occurrence of weight gain with psychotropic medications, monitoring of weight and recommendations about weight control strategies are increasingly relevant elements of treatment planning.
have nutrition and exercise been discussed?				
	Yes ☐		No ☐	
If the patient has current general medical conditions, has contact been made with the patient's primary care physician?				Collaborating with other clinicians is an important part of psychiatric management. When a patient has a current general medical condition, communication with the patient's primary care physician may be indicated.
	Yes ☐		No ☐	
Current non-psychiatric medication(s)	Dose	Frequency	Route	Knowledge of medications that patients are receiving for treatment of non-psychiatric disorders is important in looking for potential drug-drug interactions and interpreting reported side effects of treatment. Such information can also alert the clinician to the presence of general medical conditions that may not have been reported by the patient (e.g., hypertension, hyperlipidemias) or to side effects of treatment that may require changes in medications or medication doses.

Appendix B. Sample "Real-Time" Performance-in-Practice Tool for Patients with Depression (p. 4 of 6)

Current psychiatric medication(s)	Dose	Frequency	Route	
				Knowledge of medications that patients are receiving for treatment of psychiatric disorders is important in assessing the patient's response to treatment and interpreting reported side effects of treatment. In reviewing the list of the patient's current medications, infrequently administered medications (e.g., long-acting injectable antipsychotic medications) should not be overlooked. If the patient has residual symptoms, assess the adequacy of the medication dose and determine if changes in medication, medication dose or concomitant psychosocial therapy are indicated.

Has the potential for drug-drug interactions been assessed for the patient's current medication regimen? Yes ☐ No ☐ N/A ☐	Many psychotropic medications are metabolized through the cytochrome P450 and uridine 5′-diphosphate glucuronosyl-transferase enzyme systems, have high degrees of binding to plasma proteins or act on the P-glycoprotein transporter in the gastrointestinal tract. Consequently, there are many opportunities for clinically relevant drug-drug interactions to occur when patients are receiving psychotropic medications. If identification of potential drug-drug interactions is not routinely done, this may be a useful focus for performance improvement.
If any of the patient's medications require laboratory monitoring (e.g., medication blood levels, evaluation of side effects), has this been performed? Yes ☐ No ☐ N/A ☐	Specific medications may also require blood level monitoring or other follow-up laboratory testing to assess for the presence of side effects. If such monitoring is indicated but sometimes overlooked, this may also be a useful focus for performance improvement initiatives.
Is each medication essential? Yes ☐ No ☐	Continued use of non-essential medications increases costs as well as side effects and drug-drug interactions. With the fragmentation of health care, medications that were intended to be tapered may have been continued inadvertently. As a result, patients may be taking multiple medications of the same class without evidence in the literature that this improves outcomes. Regular review of patients' medication regimens may help determine which medications are essential (and should not be stopped) and which may be able to be tapered and discontinued.

Other somatic treatment approaches:

	Current	Past	Unknown	
Electroconvulsive therapy	☐	☐	☐	The current and past use of other somatic treatment approaches is relevant to treatment planning as well as to assessment of therapeutic responses and treatment-related side effects. Inquiring about past experiences with these treatments is sometimes overlooked as part of the evaluation of patients with depression.
Vagal nerve stimulation therapy	☐	☐	☐	
Other:	☐	☐	☐	

Appendix B. Sample "Real-Time" Performance-in-Practice Tool for Patients with Depression (p. 5 of 6)

Psychosocial treatments used (by psychiatrist or other clinicians):	Current	Past	Unknown	
Psychodynamic psychotherapy	☐	☐	☐	The current and past use of psychosocial treatment approaches is relevant to treatment planning as well as to assessment of therapeutic responses. Inquiring about past experiences with these treatments is sometimes overlooked as part of the evaluation of patients with depression. If the past and current use of psychosocial treatments is not routinely assessed, this may be a useful focus for performance improvement. If psychosocial treatments are being provided by other clinicians, it will be crucial to collaborate with these clinicians in the care of the patient.
Cognitive psychotherapy	☐	☐	☐	
Behavioral psychotherapy	☐	☐	☐	
Interpersonal psychotherapy	☐	☐	☐	
Supportive psychotherapy	☐	☐	☐	
Education about illness or treatment	☐	☐	☐	
Medication management	☐	☐	☐	
Self-management approaches	☐	☐	☐	
Other:	☐	☐	☐	
In reviewing the psychosocial treatment approaches that are being used:				If psychosocial treatment approaches are infrequently utilized as part of the treatment of depressed patients, this might prompt a review of typical treatment planning approaches. If the psychosocial treatments being employed do not adequately address core symptoms or residual symptoms, modifications in the patient's plan of treatment may be indicated depending upon factors such as the type and duration of treatment.
Does the treatment approach adequately target core symptoms? Yes ☐ No ☐				
Are modifications needed to address residual symptoms? Yes ☐ No ☐				
Estimated degree of adherence to treatment: Good ☐ Fair ☐ Poor ☐ Unknown ☐				Difficulty adhering to treatment is a common cause of inadequate response. Treatment of depression can be enhanced by assessing adherence, providing additional education to patients and their involved family members and discussing barriers to adherence such as costs, concerns about medication use, complexity and side effects of medication regimens and obstacles to keeping appointments (e.g., transportation, childcare, schedule constraints).
Is additional education or discussion of the treatment plan needed to enhance the patient's understanding and adherence? Yes ☐ No ☐				
Estimated magnitude of treatment-related side effects: Severe ☐ Moderate ☐ Mild ☐ Unknown ☐				Assessment of side effects of treatment is crucial in all patients and could be a focus for performance improvement if not routinely determined. Although side effects are less commonly considered in patients receiving psychosocial treatments, intensive insight oriented treatments or exposure therapies may be associated with increases in anxiety for some patients. With antidepressant medication, common side effects include sleep-related effects (i.e., sedation, insomnia), gastrointestinal effects (e.g., diarrhea, constipation, nausea), restlessness/anxiety, sexual dysfunction, headache, and anticholinergic effects. Effects on cardiac conduction can be a particular problem with tricyclic antidepressants. For all antidepressants, the FDA has issued warnings that the potential for increased suicidal thoughts or behaviors with antidepressant therapy in individuals under the age of 25 must be balanced against the benefits of treatment.
Side effects experienced:				

Appendix B. Sample "Real-Time" Performance-in-Practice Tool for Patients with Depression (p. 6 of 6)

Based upon the severity of the patient's depressive disorder, is the overall treatment approach concordant with that recommended practice guideline on the preceding page? Yes ☐ No ☐ What patient specific factors (if any) have led to modifications in the approach to treating the patient's depression compared to that recommended by the practice guideline?	Although care is often noted to diverge from guideline based recommendations, other evidence suggests that providing guideline-concordant care is likely to improve patient outcomes. However, these data are based upon populations of patients and the samples in randomized trials (on which guidelines are typically based) have different characteristics than patients seen in actual practice. If a patient's plan of treatment does diverge from that recommended in the practice guideline, it is useful to consider the patient-specific factors relevant to the treatment plan as well as the rationale for the current plan of care. If patients' treatment plans infrequently follow guideline recommendations, this might serve as a focus for performance improvement.
If the patient has current or past co-occurring psychiatric disorders, are these being addressed in the treatment plan? Yes ☐ No ☐ N/A ☐	Co-occurring psychiatric disorders are common in depressed patients and need to be considered in planning care. Including treatment for each disorder in the treatment plan is likely to improve outcomes for each disorder. Substance use disorders, in particular, are often underrecognized and undertreated, despite the fact that integrated treatment is effective. Performance improvement efforts might be focused on increasing the rates of treatment for all co-occurring disorders or may focus on specific disorders with high rates of occurrence in individuals with depression (e.g., smoking cessation in individuals with nicotine dependence).
Has the treatment plan considered factors such as age, sex, ethnicity, culture, and religious/spiritual beliefs that may require a modified treatment approach? Yes ☐ No ☐ N/A ☐	In individualizing the patient's plan of treatment, factors such as age, sex, ethnicity, culture and religious/spiritual beliefs are essential yet are often overlooked. If such factors are unassessed or infrequently incorporated into treatment planning, this might serve as a focus for performance improvement.
	Are any changes in this patient's treatment plan likely as a result of this review process?
	Are any performance improvement initiatives or further reviews of practice planned as a result of this review process?

Sample "Real-Time" Performance in Practice Tool for Patients with Depression
Survey Form and CME Certification Begin date February 2008,
End date February 2010.

To earn CME credit for this ***Survey Program***, psychiatrists should use the **Sample Real Time Performance in Practice Tool** as indicated. After using the performance in practice tool, participants should fully complete this survey and send it by mail to APACME 1000 Wilson Boulevard, Suite 1825 Rosslyn VA 22209, or fax to 703 907 7849, or send by email to educme@psych.org.

Objective: After completion of this activity psychiatrists will have the foundation for subsequent performance improvement initiatives aimed at enhancing outcomes for patients with major depressive disorder.

The APA is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians. APA designates this educational activity for a maximum of 5 AMA PRA Category 1 credits. Physicians should only claim credit commensurate with the extent of their participation in the activity.

		1	2	3	4	5	
1. Overall, I am satisfied with the usefulness of this PIP tool in assessing my practice patterns.	Strongly disagree	0	0	0	0	0	Strongly agree
2. This PIP tool was difficult for me to use.	Strongly disagree	0	0	0	0	0	Strongly agree
3. The questions and information on this PIP tool were worded clearly.	Strongly disagree	0	0	0	0	0	Strongly agree
4. The organization of information on this PIP tool was clear.	Strongly disagree	0	0	0	0	0	Strongly agree
5. I was able to complete this PIP tool rapidly.	Strongly disagree	0	0	0	0	0	Strongly agree
6. Completing this PIP tool had no effect on my knowledge about treating patients with depression.	Strongly disagree	0	0	0	0	0	Strongly agree
7. By completing this PIP tool, I have identified at least one way in which I can improve my care of patients.	Strongly disagree	0	0	0	0	0	Strongly agree
8. Completing this PIP tool has helped me to verify that I am providing appropriate care to my patients.	Strongly disagree	0	0	0	0	0	Strongly agree
9. Completing this PIP tool was a good use of my time.	Strongly disagree	0	0	0	0	0	Strongly agree
10. Reviewing my patterns of practice is a good use of my time.	Strongly disagree	0	0	0	0	0	Strongly agree

List the most helpful aspects of this PIP tool:

1.

2.

3.

List the least helpful aspects of this PIP tool:

1.

2.

3.

How do you plan to use the information gained from this self-assessment in your practice?

How might we improve upon this PIP tool in the future?

Additional comments:

Please evaluate the effectiveness of this CME activity by answering the following questions.

1. Achievement of educational objectives: YES _____ NO _____

2. Material was presented without bias: YES _____ NO _____

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Member number _____

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Appendix 4

A Comprehensive Approach to Disseminate Evidence Based Care for PTSD

Running Title: PTSD/Depression Care Dissemination Project

Meeting: PTSD Expert Panel Meeting
Date: Monday, November 3, 2008
Time: 9 AM to 5PM
Location: American Psychiatric Institute for Research & Education; 1000 Wilson Blvd, Arlington, VA; 20th Floor, Room 2030
Participants: David Benedek, MD; Henry Chung, MD; Thomas Craig, MD; Matthew Friedman, MD, PhD; Charles Hoge, MD; David Katzelnick, MD; Harold Kudler, MD; Cameron Ritchie, MD, MPH; Robert Ursano, MD; Joshua Wilk, PhD
Staff: Lisa Countis; Farifteh Duffy, PhD; Eve Mościcki, ScD, MPH; William Narrow, MD, MPH; Darrel Regier, MD, MPH; Donald Rae, MS; Elizabeth Stickman, MSW, MPH; Joyce West, PhD, MPP

TIME		ACTIVITY	PRESENTER/ DISCUSSION LEADER
8:00-9:00		**Breakfast**	
		Welcome and Introductions	
9:00-9:15	**1**	APIRE's current PTSD activities and APA's DSM-V Development	Darrel Regier
9:15-9:35	**2**	Overview of project aims, timeline, and meeting agenda ✓ What are the key components of PTSD care? ✓ What approaches are working in DoD/VA practices? ✓ Where are opportunities for improvement? ✓ How do we measure improvement?	Farifteh Duffy
		Disease Management & Dissemination Models	
9:35-10:00	**3**	Application of Chronic Care Model for PTSD	David Katzelnick
10:00-10:20	**4**	Institute for HealthCare Improvement Breakthrough Series Model	Henry Chung
10:20-10:30		**Break**	
		Current Status of the Field	
10:30- 11:00	**5**	DSM-V: PTSD diagnosis and VA assessment and treatment	Matthew Friedman
11:00- 11:30	**6**	DoD: PTSD/Comorbid TBI assessment and treatment	Charles Hoge
11:30- 11:45		***OPEN DISCUSSION***	
11:45- 12:15	**7**	PTSD Screening Instruments ✓ What are the strengths and limitations of current instruments? ✓ What top 2 instruments can be recommended for use with military men and women? ✓ What other desirable features do the best instruments offer?	Eve Mościcki Open discussion
		Guidelines	
12:15-1:15 Working Lunch	**8**	Key assessment and treatment recommendations for PTSD derived from DoD/VA, APA, and NICE Clinical guidelines and IOM report and updates on PTSD care from Guideline Watch ✓ What are key aspects of PTSD care that can be potential targets for intervention?	Farifteh Duffy Open discussion
1:15-1:45	**9**	Presenting evidence-based assessment and treatment recommendations in	Thomas Craig

		a user-friendly package	
1:45-2:00		**Break**	
		Treatment of PTSD	
2:00-2:30	**10**	DoD: Promising models for acute care of PTSD w or w/o comorbidity	Robert Ursano
2:30-3:00	**11**	VA: Promising models for chronic care of PTSD w or w/o comorbidity	Harold Kudler
		Developing the Curriculum Framework	
3:00-4:00	**12**	Revisiting Meeting Aims ✓ What are the key components of PTSD care? ✓ What approaches are working in DoD/VA practices? ✓ Where are opportunities for improvement? ✓ How do we measure improvement?	Farifteh Duffy Open discussion
4:00-4:30	**13**	Plans to recruit clinicians to participate in the PTSD/DP project ✓ Where should the pilot study be implemented, MTFs or VA treatment facilities? ✓ Who should be recruited—primary care providers, psychiatrists, other clinicians/gatekeepers? ✓ What "key staff" are important to include on the practice teams? ✓ What are the best approaches for recruiting?	Joyce West Open discussion
4:30-5:00	**14**	Preliminary plans for workshops – Next Steps	Farifteh Duffy
5:00	**15**	**Adjourn**	

Appendix 5
Comprehensive Approach to Disseminate Evidence-Based Care for PTSD (PTSD/DP)
Post-Traumatic Stress Disorder Assessment Tools

Scale & Reference	Administration	Psychometric Properties	Clinical Use	Availability	Comments
1. **Primary Care Posttraumatic Stress Disorder Screen (PC-PTSD)** *Prins, Kimerling, Cameron, Oumiette, Shaw, Thrailkill, Sheikh & Gusman, 1999*	**Length:** 4 items **Mode:** Self-report **Time:** 2-3 minutes **Scoring:** if any 2 items endorsed, or single hyper-arousal item endorsed, refer for further evaluation	**Reliability** *Test-retest reliability* r = 0.84 *Internal consistency* = 0.79 **Validity** *Optimal sensitivity and specificity* = 0.87	• Screening • Included on Post-Deployment Health Assessment (DD Form 2796)	Online	Currently used in military populations. Recommended in DoD/VA Guidelines.
2. **Post Traumatic Stress Disorder Brief Screen** *Leskin & Westrup, 1999*	**Length:** 4 items **Mode:** Self-report **Time:** 2-3 minutes **Scoring:** If two or more items endorsed, refer for additional assessment	***Overall efficiency*** = 0.78 Correlations lower for other mental disorders Adequate construct validity	• Screening	Online	Recommended in DoD/VA Guidelines
3. **Short Screening Scale for DSM-IV PTSD** *N Breslau, EL Peterson, RC Kessler, & LR Schultz, 1999*	**Length:** 7 items **Mode:** Self-report **Time:** 5 minutes **Scoring:** summation of positive responses (0 to 7) Cutoff score: 4	**Reliability** *Test-retest reliability* = 0.84 *Likelihood Ratio*: 0.04 to 13.40 **Validity** *Sensitivity:* 80% *Specificity*: 97%	• Screening	Online	Recommended in DoD/VA Guidelines
4. **Combat Exposure Scale (CES)** *T Keane, J Fairbank, J Caddell, R Zimering,K Taylor, & C Mora, 1989*	**Length:** 7 items **Mode:** Self-report **Time:** 5 minutes **Scoring:** 0 to 41 calculated by using a sum of weighted scores	**Reliability** *Test-retest reliability* = 0.97 *K*= 0.85 • Norms include military populations	• Screening • Psychiatric settings. Primarily used for war-zone related stress experiences. • Male population used for psychometric evaluation.	Online	
5. **Short Post-Traumatic Stress Disorder Rating Interview (SPRINT)** *Connor & Davidson, 2001*	**Length:** 8-item **Mode:** Self-report **Time:** 5-10 minutes **Scoring:** Symptoms are rated on 5 point scales from 0 (not at all) to 4 (very much). *Cut-off score*: 14 Populations with higher prevalence: 11- 13	**Reliability** *Test-retest reliability* = 0.778 *Cronbach's α* 0.77 at baseline and 0.88 at endpoint **Validity** *Sensitivity:* 0.95 *Specificity:* 0.96 *Convergence:* DTS *r* = 0.73 Responsive to symptom change over time 14-17 score: 96% accuracy with victims of trauma	• Screening, monitoring • Assesses the core symptoms of PTSD (intrusion, avoidance, numbing, and arousal), somatic malaise, stress vulnerability, and role and social functional impairment.	Online	

Scale & Reference	Administration	Psychometric Properties	Clinical Use	Availability	Comments
6. **Trauma Screening Questionnaire (TSQ)** *CR Brewin, S Rose, B Andrews, J Green, P Tata, C McEvedy, S Turner, & EB Foa, 2002*	**Length:** 10 items **Mode:** Self-report **Time:** 5 minutes **Scoring:** 5 re-experiencing items; 5 arousal items Cutoff score: 6	**Validity** *Sensitivity*: 0.86 *Specificity*: 0.93 • Positive Predictive Power: 0.91 • Negative Predictive Power: 0.92 • Overall Efficiency: 0.92 • Norms include military populations	• Screening: 4 weeks or more post-trauma • Based on PTSD Symptom Scale – Self Report (PSS-SR; Foa et al., 1993) • Does not assess level of fear, helplessness, or horror experienced, or information about criterion C avoidance symptoms. • Originally administered to 42 train crash survivors.	Included in article and by request Brewin, CR 2005. *J of Traumatic Stress,* 18:53-62. **Translation:** Chinese, Dutch Japanese, French	Currently used in military populations
7. **Trauma Questionnaire (TQ)** *LM McIntyre, MI Butterfield, K Nanda, K Parsey, KM Stechuchak, AW McChesney, C Koons, & LA Bastian, 1999*	**Length:** 10 items **Mode:** Self-report **Time:** apprx 5 minutes	**Validity** *Construct validity*: good to excellent Specificity and sensitivity is good, except for questions dealing with desire for mental health referral. • Norms include military populations (Statistical research ongoing)	• Screening for women's history of childhood and adult sexual trauma, sexual harassment and domestic violence. • Developed for use in veteran population; includes assessment of whether trauma occurred in the military • Subjects have requested mental health referral more frequently in clinical interviews than with the questionnaire.	Online	Currently used in military populations

Scale & Reference	Administration	Psychometric Properties	Clinical Use	Availability	Comments
8. **Impact of Event Scale (IES)** *MJ Horowitz, N Wilner, & W Alvarez, 1979*	**Length:** 15 items **Mode:** Self-report **Time:** 5-10 minutes **Scoring:** Grade Level 6.0 Subscale scores for Intrusion, Avoidance, and Hyperarousal; Total score range 0 to 75	**Reliability** • Intrusion subscale: Cronbach's α 0.79 to 0.92 • Avoidance subscale: Cronbach's α 0.73 to 0.91 • Test-retest total score 1 week interval: r = 0.93 Subscale correlations (pre-therapy, 4 mos after, and 12 mos after): 0.57 to 0.78 **Validity** Correlation: SCID • Intrusion subscale: 0.56 • Avoidance subscale: 0.29 • Total score: 0.53 MSS • Intrusion subscale: 0.56 • Avoidance subscale: 0.29 • Total score: 0.53 MMPI-PTSD • Intrusion subscale: 0.33 • Avoidance subscale: 0.21 • Total score: 0.33 Norms include military populations IES has demonstrated sensitivity to change with psychosocial and pharmalogical treatment for PTSD.	• Screening • Brief, reliable assessment of intrusion and avoidance symptoms. • Caution must be used to population that may be prone to malingering due to the high face validity of the items.	Online Copyright and permission for nonprofit research and clinical use granted by Horowitz without need for a permission request. Available on Handbook of Psychiatric Measures CD-ROM and Zilberg et al 1982 article.	
9. **PTSD Checklist (PCL)** *FW Weathers, JA Huska, TM Keane*	**Length:** 17 items **Mode:** Self-report **Time:** 5-10 minutes **Scoring:** 1-5 Scale Cutoff score: 50 Gender and/or time since a traumatic event may influence reporting style, resulting in different optimal cutoff	**Reliability** *Cronbach's α*: 0.94 to 0.97 *Test-retest reliability:* 0.96 at 2-3 days and 0.88 at 1 week **Validity** Attention should be given to cutoff scores according to population prevalence Cutoff score: 50 *Sensitivity*: 0.78 to 0.82 *Specificity*: 0.83 to 0.86 Cutoff score of 44 *Sensitivity*: 0.94 *Specificity*: 0.86 • Norms include military populations	• Screening, monitoring • Lack of studies using diverse and/or mixed samples	Online **Translation:** Spanish	Recommended in DoD/VA Guidelines

Scale & Reference	Administration	Psychometric Properties	Clinical Use	Availability	Comments
10. **PTSD Checklist-Military Version (PCL-M)** *FW Weathers, JA Huska, TM Keane*	**Length:** 17 items **Mode:** Self-report **Time:** 5-10 minutes **Scoring:** 1-5 Scale Cutoff score: 50 Re-experiencing and avoidance symptoms apply to military-related stressful experiences only	*See #9* **Reliability** • Internal consistency coefficients: 0.97 • Test-retest reliability: 0.96 (over 2-3 days) **Validity** Correlations • M-PTSD: 0.93 • MMPI-PK: 0.77 • IES: 0.90 *Sensitivity:* 0.82 *Specificity*: 0.83 K: 0.64 Norms include military populations	• Screening, monitoring	Online	Recommended in DoD/VA Guidelines
11. **PTSD Checklist – Civilian Version (PCL-C)** *FW Weathers, JA Huska, TM Keane*	**Length:** 17 items **Mode:** Self-report **Time:** 5-10 minutes **Scoring:** 1-5 Scale Cutoff score: 44 Cutoffs should be used with caution as they were developed from samples with high prevalence rates of current PTSD and may not be appropriate for samples with lower rates	*See #9* • Norms include military populations	• Screening, monitoring	Online	Recommended in DoD/VA Guidelines
12. **PTSD Checklist-Stressor Specific Version (PCL-S)** *FW Weathers, JA Huska, TM Keane*	**Length:** 17 items **Mode:** Self-report **Time:** 5-10 minutes **Scoring:** 1-5 Scale Re-experiencing and avoidance symptoms apply to a stressful experience specified by the experimenters	*See #9* **Reliability** *Cronbach's α*: 0.94 **Validity** Correlations • CAPS: 0.93 • Sensitivity: 0.94–0.97 • Specificity: 0.86 • Overall efficiency: 0.90–0.94 • Norms include military populations	Screening, monitoring	Online	Recommended in DoD/VA Guidelines

Scale & Reference	Administration	Psychometric Properties	Clinical Use	Availability	Comments
13. **Davidson Trauma Scale (DTS)** *JR Davidson, 1997*	**Length:** 17 items **Mode:** Self-report **Time:** 10 minutes **Scoring:** Dichotomous, 3-point scale, and 5-point scale from 0 to 4. Frequency score (0 to 68), severity score (0 to 68), and total score (0 to 136) Response formats vary making scale longer to complete than other 17 items scales	**Reliability** Test-retest coefficient: 0.86 (P<0.0001) repeat of the DTS one to two weeks later • 0.93 at one to two weeks • 0.73 at six months Internal Consistency: • Overall: Cronbach's α 0.99 • Frequency scale: Cronbach's α 0.97 • Severity scale: Cronbach's α 0.98 **Validity** Construct/ Convergent/ Discriminate: Correlations • CAPS: 0.78 (P<0.0001) • IES: 0.64 (P<0.0001) • SCL-90-R PTSD: 0.89 initial, 0.85 repeat • AUDIT: 0.29 initial, 0.31 repeat) • Ratio measure of thyroid function: total T3/free T4 (0.27 initial, 0.20 repeat) and startle response (0.18 initial, 0.26 repeat). Criterion-related/ Concurrent/ Predictive: Concurrent validity with Structured Clinical Interview for DSM-III-R (SCID) scores Cut-score 40 • Efficiency= 0.83 • Sensitivity = 0.69 • Specificity = 0.95 • Positive predictive value = 0.92 • Negative predictive value = 0.79 • Predictive validity /Regression analysis (DTS scores = predictor; CGI scores = outcome): (p<0.005)and R2 0.10 • Total score was a significant predictor of reaction to treatment as assessed by the CGI, although the model accounted for a small proportion of the variance in scores. • Norms include military populations	• Screening, monitoring of treatment effect, assessment of symptom severity • Assesses DSM-IV PTSD criteria (B–D) • Generalizability of the scale's use among children and adolescents is unknown.	Contact Mental Health Systems, Inc. The cost per administration/ copy is apprx. $1.00, via a copyright license agreement Available in several language translations.	

Scale & Reference	Administration	Psychometric Properties	Clinical Use	Availability	Comments
14. **IES-R** *D S Weiss & CR Marmar, 1996*	**Length:** 22 items **Mode:** Self-report **Time:** 5-10 minutes **Scoring:** 5 point Scale Revised instrument includes arousal symptoms Total score: 0 to 88 Subscales: Intrusion, Avoidance, and Hyperarousal Recommend using *means* instead of raw sums with subscales scores for comparison with SCL-90-R scores	**Reliability** • Intrusion α: 0.87 to 0.92 • Avoidance α: 0.84 to 0.86 • Hyperarousal α: 0.79 to 0.90 *Test-Retest Correlation* of subscales (shorter, longer recency of event): • Intrusion = 0.57, 0.94 • Avoidance subscale = 0.51, 0.89 • Hyperarousal subscale= 0.59, 0.92 **Validity** *Criterion (or Predictive)Validity* • Hyperarousal subscale: good predictive validity with regard to trauma. • Intrusion and avoidance subscales: detect change in respondent's clinical status over time and detect relevant differences in the response to traumatic events of varying severity *Content Validity* • Intrusion and avoidance subscales: 85% *Construct Validity:* • Two sleep items highly correlated • Ex. item-to-subscale correlation ("I had trouble falling asleep") • hyperarousal subscale: 71% • intrusion subscale: 79% • Norms include military populations	• Screening • DSM-IV PTSD criteria (B–D)	Online	